

ADMINISTRATIVE COUNTY OF ESSEX.

REPORT

OF THE


MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1933.

WILLIAM A. BULLOUGH, M.B., M.Sc., D.P.H.,
COUNTY MEDICAL OFFICER OF HEALTH.

Chelmsford :

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P R E F A C E .

To the Chairman and Members of the Essex County Council.

I have the honour to submit to you my Fifteenth Annual Report for the Administrative County of Essex for the year 1933. This is the 44th Annual Report which has been issued.

The birth-rate has again decreased from 15.4 in 1932 to 14.1 in 1933, the total number of live births being 19,141 and 18,013 respectively. This is the greatest decrease in the birth-rate since 1924. In one Municipal Borough, eight Urban Districts and five Rural Districts, the birth-rate was lower than the death-rate. The lowest birth-rate (6.4) is recorded at Frinton, and the highest (20.4) at Tilbury.

There was also a further slight decrease in the death-rate from 10.1 in 1932 to 10.0 in 1933, the rate for England and Wales being 12.3. The number of deaths from heart disease (2,815) and cancer (1,805) is the highest ever recorded in this County.

A further decrease was recorded in the infant mortality rate, *i.e.*, deaths of infants under one year of age per 1,000 births, from 50 in 1932 to 49 in 1933, the rate for England and Wales being 64. Not a single death of an infant under one year of age occurred in the Urban District of Brightlingsea.

Scarlet Fever was much more prevalent during the year, the number of cases increasing from 2,855 in 1932 to 4,827 in 1933, the notification rates being 2.3 and 3.8 respectively. The disease was of a mild type. The number of notifications of Smallpox (*Variola Minor*) fell from 68 in 1932 to 13 in 1933.

There were 1,715 primary notifications of all forms of tuberculosis during the year under review, the attack rate being slightly higher than the previous year, 1.34 for 1933 and 1.30 for 1932. This increase may be attributable to the efforts made to ensure prompt notification and to the large influx of population, chiefly from London, to the south-western part of the County. The mortality rate, however, continued to decline, the rate being 0.64 in 1933 and 0.68 in 1932.

An average number of 550 beds was kept occupied during the year. The modern forms of treatment by artificial pneumo-thorax, &c., necessitate longer periods of stay in Institutions. Consequently the demand for increased institutional accommodation continues. Further consideration was given during the year to the provision of a County Sanatorium for male patients, and although at the time of writing this report it has been definitely decided to erect a Sanatorium of 300 male beds, the purchase of a suitable site is still under negotiation. The County Council have decided to also increase the accommodation at the Black Notley Sanatorium to 300 beds.

I am much indebted to Dr. W. Burton Wood for his valuable contribution on pages 62 to 69 of this report in the nature of a special article entitled "Pulmonary Tuberculosis and Chronic Pulmonary Catarrh in Children of School Age."

It was necessary to further strengthen the Maternity and Child Welfare service by the provision of four additional Ante-Natal Centres and four Child Welfare Centres, and the appointment of three more Health Visitors. The ready availability of a consultant service and hospital treatment for ante-natal and post-natal patients was also maintained, and endeavours are being made to establish a regional consultant service amongst medical practitioners. Such a service is a vital part of any Child Welfare scheme, its main object being to assist in the efforts which are being made throughout England and Wales to reduce the maternal mortality rate which appears to show no decline. It is gratifying to note that younger women are "fully alive to the benefits and importance of careful ante-natal and post-natal supervision."

Experience in the working of the dental scheme called for its revision. Since 1st April, 1933, the County Council has undertaken responsibility for the whole of the cost of treatment provided, less a reasonable contribution from each patient.

Opportunity was taken during the year to hold the first Conference of representatives of Local Voluntary Committees who undertake such splendid work in connection with Child Welfare Centres. Views were exchanged with help to all concerned, and by request such a conference will be made an annual feature. An experimental clinic for toddlers (children under school age) was started at Hornchurch, and has proved a great success.

A revised agreement with the Essex County Nursing Association came into operation on 1st April, 1933, enabling them to press forward with the creation of new District Nursing Associations, and the extension of the scheme for the provision of motor cars for District Nurses where amalgamations of District Associations have been made. In respect to the latter, 19 Associations received motor car grants during 1933. There are now 181 District Nurses serving 326 Parishes, leaving 51 Parishes in the County without such a service. The County Nursing Association is to be congratulated upon the work carried out during the year.

Dr. John F. Beale, Bacteriologist for Essex, has again kindly given on pages 11 to 21 an account of the many and varied specimens which he examined and reported upon during the year, the gross total being 17,281 or an average of 47 per day. The facilities at the Laboratory are much appreciated by medical practitioners and hospitals from whom not a single complaint was received throughout the year.

Routine inspections of dairy herds was not undertaken in any district, but the question received consideration at a Conference of representatives of the Public Health and Housing Committee and the Diseases of Animals Sub-Committee. This resulted in the appointment of a Chief Veterinary Officer, Mr. F. W. Medlock, M.R.C.V.S., who took up duty on 19th February, 1934, and who is now preparing a scheme to provide for regular inspection of dairy herds in the County. Meanwhile, samples of milk are being obtained and submitted to biological examination. In 1933, 11 per cent. of the samples were found to contain tubercle bacilli, the percentage for 1932 being 6.4. This increase may be due to the fact that, by request, efforts were made to obtain samples direct from the producers and also from producers whose supplies had not been sampled previously.

There was a marked increase in the number of new houses erected in the Administrative County during the year, the figure being 14,836 as compared to 11,989 in 1932. The highest numbers were in Ilford B. (2,036), Hornchurch U. (1,580) and Dagenham U. (1,323). A greater number of houses was inspected, particularly in the Rural Districts, where the figure increased from 6,277 in 1932 to 10,455 in 1933. Much of this increased activity was due to the request of the Ministry of Health contained in Circular 1331, dated 6th April, 1933, that every Local Authority should prepare, adopt and submit a programme of work for dealing effectively with clearance and improvement areas, and individually defective houses, during the five years 1933-1938. It will be seen on pages 22 to 24 that the bulk of the work to be undertaken in rural districts is in connection with individually defective houses. Further investigations were, and are being made by Officers of the County Council into the housing work in Rural Districts to ensure that this work shall continue to receive the attention which its importance demands.

Another prolonged drought occurred during the year, the rainfall recorded at Chelmsford being 13.64 inches in 1933, or 6.44 inches less than in 1932. This was the lowest rainfall recorded since 1921, when the figure was 12 inches. Inquiries regarding water supplies in rural districts revealed the fact that 49.6 per cent. of the parishes have partial piped supplies, 36.9 per cent. have public shallow wells, springs, &c., and 13.5 per cent. are without a public water supply of any kind. There has been a marked shortage of water in some parishes; supplies from springs and shallow wells have failed or been depleted; and ponds and small streams have become dry. The experience proves that these sources of water supplies can no longer be regarded as permanent, and that many parts of Essex must in future be served by a network of mains connected to the trunk mains of the South Essex Waterworks Company or the Southend Waterworks Company, or fed from other permanent sources, notably the deep-seated chalk water obtainable in the north-western part of the County. At the time of writing, Mr. J. Mackworth Wood, M.Inst.C.E., is carrying out in the rural districts a detailed investigation of water supplies, and it is pleasing to note that many Rural District Councils are tackling this vital problem in a comprehensive manner and with expedition.

An investigation was carried out by Mr. E. H. Tabor, M.Inst.C.E., into the question of sewage disposal in south-west and south Essex where extensive building developments have taken place during recent years. A comprehensive report has been issued, extracts from which are given on page 31. Particular attention is drawn to the inadequacy of arrangements for sewage disposal in the lower Roding Valley. Conferences are being arranged with the Local Authorities concerned.

The exceptionally warm summer created a marked demand for swimming facilities, both indoor and outdoor, popularising this excellent form of exercise. A controversy arose in respect to the purity of the water, particularly in the open-air swimming pools which are being provided by private enterprise. The Ministry of Health published the re-assuring statement that, whilst the transmission of infection by polluted water can and does occur, there was no evidence to support the alarmists' rumours that disease in epidemic form has its origin in swimming baths in this country. It is the duty of all owners of swimming baths or pools, whether Local Authorities or private enterprise, to protect the users of the baths or pools by providing and maintaining water as free from

pathogenic bacteria as possible. This can best be achieved by a combination of efficient continuous filtration with continuous and accurately controlled chlorination and aeration. Regular sampling of the water in swimming baths and pools is desirable during the season, and should be carried out in every district.

On 18th July, 1933, the Essex County Council Act, 1933, came into operation. This is the first Act ever promoted by the Essex County Council. The promotion of the Bill caused a great amount of work for the members of the appropriate Committees and their officers, and necessitated many conferences with interested parties. The Act provides for the protection and improvement of certain streams in the County of Essex, and confers further powers on the Essex County Council and Local Authorities in relation to the health and local government and the preservation of the amenities of the County. It also enacts provisions with respect to massage establishments, hairdressers and barbers, ice cream, movable dwellings and camping grounds, refuse dumps, &c. The last-mentioned powers to control refuse dumps are long overdue: they were the subject of prolonged and careful negotiations with the London Borough and London Refuse Contractors and the Ministry of Health, and they now provide for definite control largely over the dumping of London refuse in Essex. Their application conscientiously will result in the reclaiming of marshland, turning what has hitherto been a menace to the County into a benefit, financial and otherwise.

A minor part of the Essex County Council's Review of County Districts came into force on 1st October, 1933, see page 8. The major portion appeared in an Order of the Ministry of Health dated 1st March, 1934, and will be dealt with in next year's report.

Part IV of this Report deals with the health work carried out for the Public Assistance Committee, which this year was mainly one of consolidation and improvement in many directions. A Special Committee, consisting of representatives from the Public Assistance Committee and Public Health and Housing Committee has been appointed to prepare a scheme for accommodation of the sick in the County of Essex. During the year a complete survey was made of the Ambulance Services in the County, and is now receiving consideration.

I have great pleasure in recording my appreciation of the confidence and support given to me by the Chairman and Members of the Public Health and Public Assistance Committees. To all the Medical Officers of Health and other officials of the Local Sanitary Authorities, to the Medical, Dental, Nursing and Clerical Staffs, my best thanks are due for their efficient services. I am especially indebted to the Deputy County Medical Officer, Dr. T. P. Puddicombe, for his loyalty and support.

W. A. BULLOUGH,
County Medical Officer.

PUBLIC HEALTH DEPARTMENT,
COUNTY HALL,
CHELMSFORD.

19th June, 1934.

STAFF.

A detailed list of the Medical and Health Visiting Staff was set out on pages 14—17 of the Report for the year 1930 and subsequent changes in the Reports for 1931 and 1932.

The following alterations and additions were made during 1933 :—

(1) Medical Staff.

Dr. J. L. Miller Wood commenced duty on 1st February, 1933, as First Assistant County Medical Officer to replace the late Dr. Archibald Gardiner.

Dr. C. Ive, Assistant County Medical Officer and Assistant Medical Officer of Health in the Grays, Tilbury, Purfleet and Orsett areas, resigned and terminated duty at the end of the year. From 1st January, 1934, Dr. K. N. Mawson (M.B., Ch.B., D.P.H.), was appointed. In May, 1933, Dr. Maud Bennett retired and Dr. Anna R. Park (M.B., B.S., D.P.H.), was appointed Assistant County Medical Officer and Assistant Medical Officer of Health in these areas.

In April, 1933, Dr. J. Hatton (M.D., D.P.H.), replaced Dr. J. S. Bradshaw, who resigned, as Combined Medical Officer, Braintree, Dunmow and Witham Districts.

The part-time appointment of Dr. Annie Gardiner was made whole-time from July, 1933.

The following were appointed Assistant County Medical Officers in the Dagenham area on the dates indicated :—

Dr. N. F. Pearson (M.R.C.S., L.R.C.P., D.P.H.) March, 1933.

Dr. S. Knight (M.B., B.S., D.P.H.) .. April, 1933.

Dr. R. A. Elliott (M.B., B.Ch., D.P.H.) .. January, 1934.

In regard to Medical Practitioners performing part-time County Council duties, arrangements were made for Dr. Hugh Jones (Colchester) and Dr. Rees Jones (Kelvedon) to attend certain Child Welfare Centres.

(2) Health Visitors.

The following changes took place in the health visiting staff for the reasons stated :—

Name.	Qualifications.	Date commenced duty.	District and duties.	Reason for change.
M. Wigby	.. H.V. Cert., G.N.T., Cert. Midwife	.. 1-3-33 ..	Maldon ..	.. Vacancy.
V. M. Turner	.. H.V. Cert., G.N.T., Cert. Midwife	.. 1-10-33 ..	Chingford	.. New appointment.
V. M. Robinson	.. H.V. Cert., G.N.T., Cert. Midwife	.. 8-5-33 ..	Hornchurch	.. New appointment.
J. K. Humfress	.. H.V. Cert., G.N.T., Cert. Midwife	.. 1-1-34 ..	Braintree	.. New appointment.
B. Alder (School Nurse only)	.. G.N.T., Cert. Midwife	.. 13-11-33	Dagenham	.. New appointment.
D. L. Mackenzie	H.V. Cert., Cert. Midwife	.. 18-9-33 ..	Tilbury ..	.. Vacancy.

PART I.

ACREAGE AND POPULATION.

Particulars of the acreage and estimated population for the year 1933 are given in the table below, along with information in regard to the number of Municipal Boroughs, Urban and Rural Districts, number of persons per acre, inhabited houses, &c., and the rateable value of the County :—

	Area in Acres.		POPULATION.			No. of Persons per acre. (Calculated on 1931 Census).	No. of Acres per person.	No. of inhabited houses (Census 1931).	No. of families or separate occupiers (Census 1931).	Rateable value 1st April, 1933.
			Census		Registrar-General's Estimate, 1933.					
	Census 1921.	Census 1931.	1921.	1931.						
Municipal Boroughs (9)	45,754	45,702	468,214	543,389	574,597	11.9	0.08	119,532	140,520	£7,549,729
Urban Districts (26)	100,848	101,052	216,063	371,984	411,073	3.7	0.27	87,093	92,045	
Rural Districts (17)	816,805	814,911	229,451	276,579	291,410	0.3	2.94	72,576	73,751	
	963,407	961,665	913,728	1,191,952	1,277,080	1.2	0.81	279,201	306,316	

As from the 1st October, 1933, the Ministry of Health approved of the following changes in the Sanitary Districts in the Administrative County :—

Loughton Urban District
Buckhurst Hill Urban District
and the Parish of Chigwell

} Constituted the Urban District of Chigwell.

Shoeburyness Urban District and Parts of the Parishes of Eastwood, Great Wakering, North Shoebury and Shopland

} Transferred to Southend County Borough.

Part of Braintree Rural District

.. Transferred to Witham Urban District.

The adjustments rendered necessary by these alterations have been made in the vital statistics shown in Tables XXV., XXVI. and XXVII. in Part V of the Report.

VITAL STATISTICS.

The Table on page 9 shows the chief vital statistics for the Administrative County of Essex, compared with those for England and Wales for the year 1933, and also for the preceding quinquennial period :—

	Essex.		England and Wales.	
	1929-1933.	1933.	1929-1933.	1933.
Birth-rate per 1,000 population	15·7	14·1	15·6	14·4
Death-rate „ „ „	10·3	10·0	12·3	12·3
Zymotic death-rate per 1,000 population ...	0·30	0·17	Not available.	
Infant mortality rate per 1,000 births	50	49	66	64

NOTIFICATION OF INFECTIOUS DISEASES.

A summary of the notifications of infectious diseases in the various Sanitary Districts during 1933 is set out in Table XXVII. on page 107. 10,446 persons were notified as suffering from infectious diseases, the attack rate being 8·2 as against 7·5 for 1932.

Scarlet Fever was more prevalent than in the previous year, the attack rate per thousand being 3·8, compared with 2·3 in 1932. Fortunately the disease was mild.

SMALLPOX. Thirteen cases of smallpox were notified, all of which occurred in the Urban Districts. There were no deaths and the disease was of a mild character.

VACCINATION.

During the year ended 31st December, 1932 (the latest period for which complete information is available), the Vaccination Officers' returns summarised in Table I. show that 17,566 births were registered. Of these, 5,860 (33·4 per cent.) were successfully vaccinated, and in 8,898 (50·7 per cent.) instances, a declaration of conscientious objection was made. Of the remaining 2,825 births, 642 removed to places unknown, 448 removed to districts of other Vaccination Officers who were duly notified, in 185 cases vaccination was postponed by medical certificate, 69 proved insusceptible of vaccination, and 592 died unvaccinated: At the end of the year, 872 births remained which had not been entered in the vaccination register or temporarily accounted for in the report book.

With regard to the number of persons successfully vaccinated and re-vaccinated at the cost of the rates by Public Vaccinators and Medical Officers of Poor Law Institutions, the Clerk of the County Council has kindly forwarded to me the following information in respect of the year ended 30th September, 1933 :—

Number of successful Primary Vaccinations of persons :—

(a) Under 1 year of age	4,532
(b) One year and upwards	674
(c) Total	5,206

Number of successful re-vaccinations, *i.e.*, successful vaccinations of persons who had been successfully vaccinated at some previous time 872

TABLE I.

Guardians Committee Areas.	No. of Births in "Birth List Sheets" registered 1st Jan. to 31st Dec., 1932.	No. of these Births entered by 31.1.34 in Cols. I, II, IV and V of the "Vaccination Register" (Birth List Sheets), viz. :—					No. of Births which on 31.1.34 remained unentered in the "Vac- cination Register" on account of :—			No. of these Births remaining 31.1.34 neither entered in the "Vaccination Register" nor temporarily accounted for in "Report Book."	No. of Certificates of successful Primary Vaccination of Children under 14 received during 1933.	No. of Statutory Declarations of Conscien- tious objection received by V. O. during 1933.
		Col. I. Success- fully vacci- nated.	Col. II.		Col. IV. No. of Statu- tory Decla- rations.	Col. V. Died un- vacci- nated.	Postpone- ment by medical certifi- cate.	Removal to Districts the Vaccination Officer of which have been appraised.	Removal to places to unknown and cases not found.			
			Insus- ceptible of vacci- nation.	Had Small- pox.								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Colchester ..	1,974	714	11	—	1,023	77	6	27	27	89	848	942
Braintree ..	815	277	6	—	470	35	6	1	14	6	268	387
Saffron Walden ..	467	275	—	—	153	17	1	4	10	7	333	146
Epping ..	1,059	460	4	—	413	32	15	13	23	99	436	386
South Western ..	2,907	812	6	—	1,628	121	42	59	118	121	1,251	1,525
South Eastern ..	2,223	598	5	—	1,120	79	11	124	73	213	621	1,002
Southern ..	6,222	2,063	29	—	3,121	188	95	194	281	251	2,643	2,915
Chelmsford ..	1,899	661	8	—	970	43	9	26	96	86	657	940
	17,566	5,860	69	—	8,898	592	185	448	642	872	7,057	8,243

The Totals of the figures in columns 3 to 11 agree with the figure in Column 2.

In 1932 the Ministry of Health made enquiries from local authorities in regard to the operation of the Vaccination Acts and received replies indicating that the majority of authorities favoured the replacement of the compulsory provisions of the Vaccination Act by provisions for free vaccination under arrangements made by local authorities. The whole matter is at present receiving careful consideration by the Ministry of Health, but no decision in regard to amendment of the existing law has been reached.

ISOLATION HOSPITALS.

Table II. on page 12a records the number of beds, number of cases treated, cost per bed, &c., at those Hospitals to which grants (at £5 per bed and £10 for motor ambulance) were made by the County Council for beds provided out of loan. During the year a special grant of £100 was made to the Borough of Walthamstow in accordance with Clause 1 (c) of the County Council's scheme. A special grant of £20 was also made to the Orsett Joint Hospital Board towards the cost of the new ambulance provided for smallpox purposes.

Grants at the rate of £2 10s. per bed for beds provided out of revenue were also made to Colchester (40 beds), Dunmow (4 beds), Halstead (4 beds) and Orsett (48 beds). A grant of £10 was made to the Borough of Leyton for the motor ambulance provided at the Leyton Isolation Hospital.

The scheme for securing the provision of suitable means for the proper isolation and treatment of persons suffering from infectious diseases, as required by Section 63 of the Local Government Act, 1929, was postponed pending the decision of the Ministry of Health in regard to the revision of Sanitary Districts. At the time of writing, further consideration has been given to this matter and the scheme is nearing completion.

VENEREAL DISEASES.

Essex is one of the participating authorities in the London and Home Counties Venereal Diseases Scheme, which provides facilities for advice and treatment at most of the large London Hospitals. In addition, clinics are available for Essex patients at Chelmsford, Colchester and Ipswich General Hospitals, at Southend Borough Sanatorium and at Gravesend. A number of Essex patients also attend the Venereal Diseases Clinic established at the Prince of Wales Hospital, Tottenham.

Table III. on page 13 shows a great increase in the number of attendances of Essex patients at the various clinics since 1928 and also an increase in the number of in-patient days.

LOCAL GOVERNMENT ACT, 1929.

SECTION 46. REVIEW OF COUNTY DISTRICTS. A small part of the County Council's proposals relating to the extensions of the County Borough of Southend-on-Sea; the creation of the new Urban District of Chigwell and the extension of the boundary of the Urban District of Witham came into operation on 1st October, 1933 (see page 8). The approval of the County Council's proposals for the other parts of the Administrative County was not received from the Ministry of Health until after the expiration of the year 1933.

SECTION 57. SEWERS OR SEWAGE DISPOSAL WORKS AND WATER SUPPLIES.

On 3rd October, 1933, the County Council approved of the following Scheme for the making of contributions to District Councils in the County, towards the expenditure incurred in the provision or maintenance of any sewers or sewage disposal works, or of a supply of water, or in the improving of an existing supply of water :—

1. Contributions under Section 57 of the Local Government Act, 1929, shall be limited to Rural Districts and to Urban Districts in respect of parishes of a rural character.

2. Applications will be dealt with in such order of priority as the County Council, on the advice of the Public Health and Housing Committee, may deem desirable.

3. Before applications are considered, the District Councils shall provide information showing the necessity for the proposed works, and that such works represent the most satisfactory method of providing the services required.

4. Each application will be considered on its merits and any grant will be based on the net cost of the scheme, *i.e.*, credit being taken for any contributions by way of grants from Government.

5. No contribution generally will be made by the County Council unless the District Council gives full effect to Section 56 (1) of the Local Government Act, 1929, by abolishing all special expenses for schemes for the provision or maintenance of any sewers or sewage disposal works, or of a supply of water, or in the improvement of an existing supply of water, and charging such expenditure as general expenditure of the district.

6. No contribution will be made, except when the total general rates of the district, after the abolition of special expenses in accordance with Clause 5 hereof, with the addition of the rate required for the scheme, exceed a rate of 12s. 6d. in the pound.

7. Any excess above a rate of 12s. 6d. in the pound will rank for a grant from the County Council on a sliding scale, whereby the proportion payable by the County Council increases as the required rate exceeds 12s. 6d. in the pound, *viz.* :—

(a) Where such rate would be between 12s. 6d. and 13s. 6d. in the pound, the County Council will pay two-fifths of the increase in rate over 12s. 6d. occasioned by the scheme.

(b) Where such rate would be over 13s. 6d. in the pound, the County Council will pay two-fifths of the increase in the rate up to 13s. 6d. and one-half of the balance over 13s. 6d. occasioned by the scheme.

8. In ascertaining the "total" rate, the actual rate levied will be adjusted, if necessary, to correct any deviation from the true rate by reason of an increase or decrease of working balances, &c.

9. Any proposed contribution will be assessed on estimated figures both as regards the produce of a penny rate and the cost of the scheme. Such contribution shall be subject to confirmation and adjustment on production of actual figures.

10. In the case of a scheme for the provision of a supply of water, or the improvement of an existing supply of water, the District Council must charge all consumers such water rates and charges as the County Council shall approve.

11. Contributions under this scheme shall not extend beyond the period fixed for loans raised for the purpose of the works.

12. Any contribution payable under this scheme may be by way of a capital sum in assistance towards the payment of a loan as the County Council may decide.

13. This scheme is subject to revision or revocation by the County Council at any time so far as it concerns applications not already granted.

SECTION 58. APPOINTMENT OF MEDICAL OFFICERS OF HEALTH. SECTION 6 HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES. The draft schemes required under these sections are held in abeyance, pending the decision of the Minister of Health in regard to the Review of the County Districts referred to on page 11.

SHOWING PARTICULARS OF WORK CARRIED OUT BY LOCAL SANITARY AUTHORITIES UNDER THE PUBLIC HEALTH AND HOUSING ACTS DURING THE YEAR 1933.

SANITARY DISTRICT.	NEW HOUSES ERECTED DURING 1933.				INSPECTION OF DWELLING HOUSES DURING THE YEAR.							No. of defective Dwelling Houses rendered fit in consequence of informal action by the Local Authority or their Officers.	PROCEEDINGS UNDER SECTIONS 17, 18 AND 23 OF THE HOUSING ACT, 1930.			PROCEEDINGS UNDER PUBLIC HEALTH ACTS.			PROCEEDINGS UNDER SECTIONS 19 & 21 OF HOUSING ACT, 1930.		PROCEEDINGS UNDER SECTION 20 OF HOUSING ACT, 1930.	
	Total.	By			(a) Total No. inspected for Housing Defects under Public Health or Housing Acts.	(b) No. of Inspections made for the purpose.	(c) No. of Dwelling Houses (including sub-head (a)) which were inspected and recorded under Housing Consolidated Regs., 1925.	(d) No. of Inspections made for the purpose.	(e) No. found to be in a state so dangerous or injurious to health as to be unfit for human habitation.	(f) No. (excluding those referred to under (e)) found not to be in all respects reasonably fit for human habitation.	No. of Dwelling Houses in respect of which Notices were served requiring Repairs.		No. of Dwelling Houses which were rendered fit after service of formal Notices.		No. of Dwelling Houses in respect of which Notices were served requiring defects to be remedied.	No. of Dwelling Houses in which defects were remedied after service of formal Notice.		No. of Dwelling Houses in respect of which Demolition Orders were made.	No. of Dwelling Houses demolished in pursuance of Demolition Orders.	No. of separate Tenements or Under-ground Rooms in respect of which Closing Orders were made.	No. of separate Tenements or Under-ground Rooms in respect of which Closing Orders were determined, the Tenement or Room having been rendered fit.	
		The Local Authority	Other Local Authorities	Other Bodies or Persons.									By Owners.	By Local Authority in default of Owners.		By Owners.	By Local Authority in default of Owners.					
URBAN.																						
BARKING B. ..	1844	154	1386	304	3125	9425	912	1060	90	1943	1591	172	162	..	208	175	1	5	14	..	..
BENFLEET ..	140	..	..	140	138	138	74	74	15	68	28	2	..	..	16	11	1	1	1	..	..
BRAINTREE ..	37	..	..	37	813	2584	655	1975	41	71	41	1	..	..	7	7	..	..	5	..	..
BRENTWOOD ..	53	..	..	53	259	452	50	150	30	96	96	..	..	..	..	15	..	..	..	..	..
BRIGHTLINSEA ..	18	..	..	18	470	500	470	500	..	202	54	..	..	..	5	5	..	..	..	..	..
BUCKHURST HILL ..	66	..	..	66	50	180	..	..	..	30	30	..	..	..	..	..	..	..	..	..	..
BURNHAM-ON-CROUCH ..	9	..	..	9	175	250	175	250	..	..	..	..	..	..	..	..	..	..	..	..	..
CANVEY ISLAND ..	203	..	..	203	28	63	28	63	6	22	20	..	..	..	..	8	8	..	..	..	..
CHELMSFORD B. ..	123	..	..	123	1367	2473	124	209	29	97	87	..	..	..	215	178	..	10	..	..	..
CHIGWELL ..	41	..	..	41	25	112	9	40	..	16	16	..	..	..	..	..	..	..	..	..	..
CHINOFORD ..	651	..	..	651	730	2617	51	524	12	38	499	7	2	..	13	7	6	1	1	..	..
CLACTON-ON-SEA ..	317	..	..	317	580	1056	114	231	15	142	84	..	..	..	67	56	1	..	2	..	..
COLCHESTER B. ..	362	102	..	260	727	3970	86	1108	25	554	542	16	13	9	74	71	13	18	5	..	..
DAGENHAM ..	1323	132	21	1170	2654	7818	2146	6198	9	549	314	1	7	..	380	404	..	7	7	2	..	
EPING ..	20	..	..	20	75	201	50	106	40	10	31	10	10	..	21	21	..	..	..	..	..
FRINTON-ON-SEA ..	25	..	..	25	18	23	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
GRAYS ..	159	..	..	159	530	1584	173	173	..	173	173	11	11	..	..	..	..	..	..	..	..
HALSTEAD ..	4	..	..	4	238	586	53	53	53	186	98	75	70	..	..	..	..	..	..	..	..
HARWICH B. ..	36	..	..	36	309	532	281	466	38	172	14	..	..	..	..	..	..	..	3	..	..
HORNCHURCH ..	1580	14	..	1566	494	826	40	120	1	128	81	..	..	..	30	24	..	4	4	..	..
ILFORD B. ..	2036	..	..	2036	1356	3069	217	924	16	571	557	162	167	..	2	1	..	14	14	..	..
LEYTON B. ..	129	60 flats	..	45	3760	13582	1099	3333	13	1695	1855	..	..	..	..	..	..	15	22	..	..
				Flats 24																		
LOUGHTON ..	221	..	..	221	117	262	20	100	..	32	32	20	20	..	..	..	..	3	..	..	..
MALDON B. ..	78	50	..	28	186	366	136	208	3	13	11	13	11	..	50	44	..	..	..	..	..
PURFLEET ..	48	6	..	42	305	1692	24	24	23	282	266	5	5	..	2	2	..	5	..	..	..
RAYLEIGH ..	136	..	..	136	364	380	..	..	3	71	20	45	40	1	41	310	..	3	3	..	..
ROMFORD ..	950	..	..	950	631	1237	574	630	2	481	429	..	..	..	18	8	..	2	..	..	..
SAFFRON WALDEN B. ..	24	..	..	24	342	456	16	47	13	100	96	4	4	..	1	1	..	1	1	..	..
SHOEBURYNESSE ..	59	..	..	59	56	120	3	9	..	..	24	..	..	..	..	..	..	..	..	..	..
TILBURY ..	17	16	..	1	909	2261	342	1012	26	732	432	159	46	..	141	119	..	..	..	..	..
WALTHAM HOLY CROSS ..	79	62	..	17	213	394	78	205	17	121	101	51	29	..	9	9	..	15	11	..	..
WALTHAMSTOW B. ..	578	84	..	494	4037	12389	983	3521	51	2381	2193	101	76	2	15	15	..	..	..	..	..
WALTON-ON-THE-NAZE ..	34	..	..	34	8	14	8	14	3	3	2	..	..	..	..	..	..	3	..	..	..
WANSTED ..	195	..	..	195	420	1480	103	451	..	103	124	20	..	1	3	3	..	..	..	..	..
WEST MERSEA ..	37	4	..	33	56	65	56	56	..	26	12	2	..	..	..	..	..	..	..	..	..
WITHAM ..	33	12	..	21	180	250	101	150	28	51	48	..	..	..	..	..	..	..	..	..	..
WIVENHOE ..	10	..	..	10	259	467	61	100	28	39	12	9	9	..	10	9	1	2	2	..	..
WOODFORD ..	561	..	..	561	547	1777	340	980	1	337	297	..	..	..	3	3	..	..	..	..	..
URBAN TOTAL ..	12236	696	1407	10133	26551	75651	9652	25064	631	11535	10310	886	682	13	1339	1506	23	109	98	2	..	
RURAL.																						
BELCHAMP ..	8	6	..	2	301	301	34	34	45	23	111	..	..	..	111	111	..	38	24	..	..
BILLERIOAY ..	569	30	6	533	1003	1234	302	442	25	277	22	117	50	..	110	106	..	11	6	..	..
BRAINTREE ..	83	18	..	65	1701	2255	1453	1453	188	1012	77	4	..	..	4	3	..	13	1	..	..
BUMPSTEAD ..	2	..	..	2	75	480	33	112	10	33	33	..	..	..	28	28	..	10	..	..	..
CHELMSFORD ..	222	4	..	218	202	688	104	419	52	100	67	..	..	..	60	50	..	4	3	1	1
DUNMOW ..	73	16	..	57	300	407	176	202	82	101	63	..	..	..	..	..	..	..	..	..	..
EPING ..	109	..	..	109	707	2147	276	1026	11	444	368	2	2	..	23	24	..	1	1	..	..
HALSTEAD ..	..	..	..	..	357	592	145	550	25	83	62	..	..	..	1	1	..	..	..	..	..
LEXDEN AND WINSTED ..	162	..	..	162	705	1661	223	725	20	197	155	..	..	..	1	2	..	1	6	..	..
MALDON ..	90	..	..	90	240	781	77	298	26	51	121	14	10	..	3	..	..	2	1	1	..
ONGAR ..	95	..	..	95	1278	1300	..	..	38	575	6	..	..	..	..	..	..	..	..	..	..
ORSETT ..	276	28	..	248	482	754	150	442	13	294	240	4	18	1	25	18	3	5	5	..	..
ROCHFORD ..	232	..	..	232	238	618	81	198	25	56	47	4	2	..	47	26	4	12	1	..	..
ROMFORD ..	456	42	..	414	284	435	147	206	9	118	77	12	12	..	10	10	..	1	5	1	..	
SAFFRON WALDEN ..	22	4	..	18	1849	2958	1411	2255	71	1226	1122	10	10	..	84	80	..	4	..	7	1	
STANSTED ..	60	14	..	46	296	352	296	352	7	14	52	14	14	..	..	..	..	..	..	..	..
TENDRING ..	141	12	..	129	437	561	309	363	28	156	40	..	..	..	..	..	..	10	5	..	..
RURAL TOTAL ..	2600	174	6	2420	10455	17524	5217	9077	675	4760	2663	181	118	1	507	459	7	112	58	10	2	
BORO' & URBAN TOTAL	12236	696	1407	10133	26551	75651	9652	25064	631	11535	10310	886	682	13	1339	1506	23	109	98	2	..	
TOTAL FOR ADMINISTRATIVE COUNTY ..	14836	870	1413	12553	37006	93175	14869	34141	1306	16295	12973	1067	800	14	1846	1965	30	221	156	12	2	

TREATMENT OF VENEREAL DISEASE, YEAR 1933.

Treatment Centre.	Patients from all Areas. Total No. treated for first time.	ESSEX PATIENTS.							In-patient Days.	Number of doses of Arseno-Benzene Compound given in Out-patient Clinic and In-patient Department.	Hostels. In-patient days.
		Total Number treated for first time suffering from					Total No. of Attendances of Essex Patients.				
		Syphilis.	Soft Chancre.	Gonorrhœa.	Not V. D.	Total.					
London Hospitals	28714	205	10	630	504	1349	55244	3352	3615	1307	
St.Bartholomew's, London	1023	1	—	—	5	7	49	—	19	—	
Chelmsford ...	18	5	—	9	4	18	525	—	49	—	
Colchester ...	120	38	1	48	22	109	2254	123	613	—	
Ipswich	194	4	—	3	3	10	113	16	59	—	
Southend ..	352	18	3	37	45	103	1633	—	83	—	
Gravesend ...	294	26	6	34	19	85	3079	—	453	—	
Tottenham ...	401	6	—	13	10	29	471	—	51	—	
Total for 1933...	31,116	303	20	774	613	1710	63368	3491	4942	1307	
Total for 1932...	29,935	274	13	693	659	1639	53444	2288	4688	2173	
" 1931...	27,970	281	30	580	564	1455	45007	2245	4949	2416	
" 1930...	29,086	322	20	503	543	1388	33614	1311	3429	2601	
" 1929...	26,516	315	14	466	434	1229	28523	1632	2817	2222	
" 1928...	27,576	259	12	505	425	1201	25880	2831	2491	2373	

EXAMINATION OF BACTERIOLOGICAL SPECIMENS.

This work is undertaken by the Bacteriologist for Essex, Dr. John F. Beale, 91, Queen Victoria Street, London, E.C.4. Telephone Number : Central 6836.

Table IV. on page 15 gives the number and type of specimens examined and shows that during the year 16,495 Public Health specimens were dealt with, the figure for the previous year being 15,223. In addition, Dr. Beale examined 104 sewage and trade effluents and river water.

Dr. Beale has kindly supplied the following report on the work undertaken during the year :—

The specimens examined in the Laboratory during 1933 are divided into two groups, as follows :—

(a) Those received from Infectious Diseases and other Hospitals, Sanatoria, Medical Officers of Health and Medical Practitioners.

(b) Those received from Public Assistance Institutions.

The number of specimens examined under the former heading was 16,495, and their distribution throughout the Administrative County is shown in Table IV.

In addition to the 16,495 specimens summarised in this table, there were also examined :—

Animal Inoculation Tests for Virulence of Diphtheria Bacilli	74
Animal inoculation tests for Tubercle Bacilli and other Bacteria	6
Microscopical and Bacteriological Examinations of Samples of Milk	123
Animal Inoculation Tests for Tubercle Bacilli on Samples of Milk	422
Chemical Analysis of Samples of Drinking Water ..	17
Bacteriological Examinations of Samples of Drinking Water	17
Chemical Analysis of Samples of Sewage Effluents and Trade Wastes	82
Bacteriological Examination of Samples of Effluent ..	1
Chemical Analysis of Samples of River Water ..	22
Bacteriological Examination of Samples of River Water ..	22
The total number, therefore, is	17,281

(a) Public Health Specimens.

Diphtheria, Scarlet Fever, etc.—Throat, Nose and Ear Swabs.

The majority of the swabs are submitted for examination for Diphtheria Bacilli, but many are also specially examined for other bacteria, the most frequent being the organisms of Vincent's Angina and Streptococci.

TABLE IV.

SHEWING NUMBER AND TYPE OF SPECIMENS EXAMINED BY THE
BACTERIOLOGIST FOR ESSEX—YEAR 1933.

SANITARY DISTRICTS.		Diph- theria.	Sputa.	Typhoid	Ring- worm.	Miscel- laneous.	Total Specimens examined.	Virulence Tests.
RBAN—								
Barking B.	...	+1483	+236	31	11	14	1775	1
Benfleet	...	523	27	1	...	2	553	...
Braintree	...	65	+62	5	2	22	156	...
Brentwood	...	64	+71	3	...	17	155	...
Brightlingsea	...	19	+6	1	...	1	27	...
Buckhurst Hill	...	9	5	...	1	1	16	...
Burnham-on-Crouch	...	6	1	3	3	1	14	...
Canvey Island	...	29	19	...	...	2	50	...
Chelmsford B.	...	+169	+96	5	...	38	308	...
Chigwell	...	4	3	...	...	2	9	...
Chingford	...	184	204	6	...	15	409	...
Clacton-on-Sea	...	66	+72	...	...	4	142	...
Colchester B.	...	3	+198	28	...	2	231	...
Dagenham	...	461	+312	1	39	25	838	3
Epping	...	69	+41	59	1	17	187	...
Frinton-on-Sea	...	...	2	...	...	...	2	...
Grays	...	199	+102	1	6	14	322	...
Halstead	...	44	+16	91	2	8	161	...
Harwich B.	...	83	+53	7	17	5	165	...
Hornchurch	...	56	35	2	5	8	106	...
Ilford B.	...	+268	+558	15	3	62	906	62
Leyton B.	...	+1428	+757	15	7	21	2228	...
Loughton	...	1	7	...	...	...	8	...
Maldon B.	...	39	+48	4	3	3	97	...
Purfleet	...	34	10	...	...	...	44	...
Rayleigh	...	77	8	2	1	3	91	...
Romford	...	+441	+184	13	11	44	693	3
Saffron Walden B.	...	37	+38	...	15	5	95	...
Shoeburyness	...	27	26	...	6	4	63	...
Tilbury	...	240	50	1	2	5	298	...
Waltham Holy Cross	...	+259	+47	3	...	15	324	1
Walthamstow B.	...	88	+616	27	10	22	763	4
Walton-on-the-Naze	...	9	8	...	...	2	19	...
Wanstead	...	1	27	...	...	...	28	...
West Mersea	...	4	1	...	...	24	29	...
Witham	...	9	19	...	...	5	33	...
Wivenhoe	...	...	...	...	...	...	...	...
Woodford	...	245	+77	4	1	6	333	...
Total		6743	4042	328	146	419	11678	74
RURAL—								
Belchamp	...	4	1	...	...	...	5	...
Billericay	...	+974	303	10	2	13	1302	...
Braintree	...	113	+50	20	5	76	264	6
Bumpstead	...	2	2	...	...	...	4	...
Chelmsford	...	63	49	6	2	38	158	...
Dunmow	...	54	+23	18	1	2	98	...
Epping	...	77	46	4	3	4	134	...
Halstead	...	24	32	13	...	3	72	...
Lexden & Winstree	...	53	21	1	1	24	100	...
Maldon	...	+64	35	14	6	7	126	...
Ongar	...	45	7	...	1	11	64	...
Orsett	...	+685	32	1	1	5	724	...
Rochford	...	+327	24	...	7	4	362	...
Romford	...	56	+1201	1	4	16	1278	...
Saffron Walden	...	14	11	...	...	2	27	...
Stansted	...	7	7	...	...	...	14	...
Tendring	...	40	+37	1	6	1	85	...
Totals— Rural	...	2602	1881	89	39	206	4817	6
Urban	...	6743	4042	328	146	419	11678	74
Adminis. County		9345	5923	417	185	625	16495	80

+ Includes specimens taken at Isolation Hospital in District.

+ " " Sanatorium or Dispensary in District.

All swabs received for examination for Diphtheria Bacilli are examined by cultural methods only, unless specially requested, when direct examination is also made. The latter method of examination, whilst effecting a saving of time, is less reliable than the cultural method. It is helpful as an occasional procedure in selected cases, but is not recommended as a routine method.

Since cultures generally require 12 to 18 hours' incubation before being suitable for examination, it is important that swabs should be got to the laboratory as quickly as possible after collection in order that a result may be available at the earliest moment. Time in transit could often be saved by submitting swabs by express post, or special messenger.

Every effort to avoid delay in obtaining a result is made at the laboratory, but the co-operation of the sender in this respect is necessary. All positive results are communicated to the Medical man sending the specimen by telephone when available, or otherwise by telegram, and then confirmed in writing. Negative results are returned by post unless otherwise requested.

This procedure is adopted in the case of all pathological specimens of an urgent character.

Enquiries are frequently made at the laboratory by patients or their relatives concerning the results of specimens, and such requests sometimes appear to be made at the suggestion of the doctor, a procedure which is deprecated.

It is the rule of the laboratory that information concerning specimens is never given in such cases, and results are only communicated to the medical man concerned, or in the case of Hospitals, to the Matron or other authoritative person.

The results of the 9,345 swabs examined for Diphtheria Bacilli were as follows :—

715 or 7·6 per cent. gave positive results.

8,630 or 92·4 per cent. gave negative results.

A large proportion of the total number of swabs examined are received from the Infectious Diseases Hospitals, which accounts for the apparently low percentage of positive results. In most of these Hospitals it is the rule to obtain three consecutive negative results from convalescents before their discharge from Hospital.

When patients who clinically have recovered from Diphtheria, or suspected carriers of the disease who have not been ill, continue to give positive results on bacteriological examination of swabs, it is customary to submit the cultures to animal inoculation test to ascertain the virulence or otherwise of the organisms.

Of the 74 virulence tests thus applied, the organisms proved to be virulent in 20 instances, or 27 per cent.

Except in special cases, three consecutive results are required before resort is made to animal tests.

During the year a large increase has occurred in the number of throat swabs submitted for examination for Streptococci, particularly from patients recovering from Scarlet Fever.

The value of this examination is open to question, since the precise relationship of Streptococci to Scarlet Fever is not definitely decided or generally accepted, and the classification and differentiation of Streptococci is far from satisfactory.

The isolation of Streptococci in pure culture and separation into hæmolytic and non-hæmolytic strains was carried out in 50 cultures obtained from throat swabs. In 8 cases, hæmolytic strains of Streptococci were found and in 42 all the strains of Streptococci investigated proved non-hæmolytic.

Pulmonary Tuberculosis—Specimens of Sputum, etc.

All specimens of sputum are examined for Tubercle Bacilli by the concentration method before a negative result is given.

Of the 5,923 specimens of sputum examined for Tubercle Bacilli, 1,703 or 28·7 per cent. gave positive results.

Since a large percentage of the specimens are received from the County Sanatoria, they are in many cases repeat specimens from diagnosed cases.

In addition to search for Tubercle Bacilli, many specimens have been examined microscopically for elastic tissue, asbestosis bodies, &c., and cultural examination for bacteria other than Tubercle Bacilli, such as Pneumococci and Streptococci, is frequently carried out.

The Miscellaneous Specimens listed in Table IV includes many specimens such as Pus, Urine, Pleural Fluids, &c., also examined specially for Tubercle Bacilli.

Many specimens of fæces, mostly from infants, have also been submitted for examination for Tubercle Bacilli, and other examinations less frequently required are microscopical examinations for amoebæ of dysentery and the ova of intestinal parasites.

Enteric Fever, etc. Specimens of Blood, Faeces and Urine.

The examinations carried out under this heading include :—

312 specimens of blood for agglutination reactions.

101 specimens of fæces	}	examined culturally for Bacilli of the Typhoid-paratyphoid group.
25 specimens of urine		

9 specimens of blood for cultural examination.

All specimens of blood sent for agglutination reactions are examined for B. Typhosus and B. Paratyphosus B., the reaction for B. Paratyphosus A. only being carried out when requested owing to the extreme rarity of infections by this organism in Great Britain.

Of the 312 specimens examined, 5 gave positive reactions to B. Typhosus and 45 were positive to B. Paratyphosus B., which continues to be the more frequent infection at the present time.

In addition to examination for Typhoid-paratyphoid Fever, 6 specimens of blood were examined serologically for infections by organisms of B. Dysenteries and B. Abortive Groups, but all gave negative results.

B. Paratyphosus B. was isolated from 3 specimens of Fæces and B. Typhosus from 1 specimen, but all the specimens of urine examined gave negative results for these organisms.

There has been no indication from the laboratory records of any epidemics of the enteric diseases throughout the year.

In addition to the specimens of fæces examined microscopically and culturally under preceding headings, 5 specimens were examined for Occult Blood.

Specimens of Urine.

In addition to the specimens examined culturally for Typhoid-paratyphoid Bacilli, the following examinations were carried out :—

- 165 chemical examinations.
- 177 microscopical examinations.
- 137 examinations for Tubercle Bacilli.
- 72 cultural examinations.

Of the 137 specimens of urine examined for Tubercle Bacilli, 9 gave a positive result.

Specimens of Other Body Fluids.

These include :—

(a) *Cerebro-Spinal Fluids.* 23 Specimens. These were submitted to chemical and microscopical examination, search for Tubercle Bacilli and cultural examination for Meningococci and other Pyogenic Bacteria.

Tubercle Bacilli were found in 2 specimens, and 2 others gave findings characteristic of Tuberculosis Meningitis though the casual organism was not found.

(b) *Pleural Effusions.* 24 specimens of chest fluid were examined microscopically, cytologically, for Tubercle Bacilli, and culturally for other bacteria.

(c) *Abdominal Fluids.* 3 specimens were examined microscopically and culturally and also for Tubercle Bacilli.

(d) *Joint Fluids.* 4 specimens were examined microscopically, culturally and also for Tubercle Bacilli.

(e) *Pus.* 59 specimens of pus, from abscesses, enlarged glands, &c. were submitted to microscopical and cultural examinations and to examination for Tubercle Bacilli, which were found in 16 cases.

4 specimens were specially submitted for examination for Anthrax Bacilli, which organisms were not, however, found in any case.

Specimens of Hairs.

185 specimens of hairs were examined for Ringworm Fungus. 43 of the specimens or 22 per cent., gave a positive result.

Puerperal Fever.

21 specimens of Uterine Swabbings were examined bacteriologically from suspected cases of Puerperal Fever. Special search is made in these cases for Streptococci and where found, they are isolated in pure culture, submitted to hæmolysis tests and differentiated into hæmolytic and non-hæmolytic strains.

Histological Examinations. 5 Specimens.

Histological examinations are not ordinarily carried out. The 5 examinations made were from patients in the County Sanatoria.

Samples of Milk.

(a) 123 specimens of Milk were examined during the year. These examinations had special reference to the cleanliness of the milk and the examination included (1) observation with regard to suspended dirt ; (2) cultural examination for bacilli of the colon group ; and (3) microscopical examination for Pus and Red Blood Cells, and for Tubercle Bacilli.

(b) 422 samples of Milk were submitted to animal inoculation test for Tubercle Bacilli and 49 or 11.6 per cent. gave positive results.

(b) Specimens from the Public Assistance Hospitals.

The nature and distribution of these specimens differ considerably from those included in the preceding groups, since the Public Assistance Institutions are General Hospitals, as distinguished from the special hospitals treating cases of Tuberculosis and the Infectious Diseases.

The total number of specimens examined in this Group during the year was 1281.

These included the following :—

Blood. 265 specimens.

56 for Estimation of Blood Sugar.

105 for Estimation of Blood Urea.

11 for Estimation of Blood Calcium.

15 for Cytological Examination, Differential Cell Counts, &c.

16 for Blood Culture.

58 for Agglutination reaction for Typhoid-paratyphoid Fever.

1 for Agglutination reaction for Dysentery.

2 for Agglutination reaction for Relapsing Fever.

1 for Spectroscopic examination for Carbon Monoxide Poisoning.

Faeces. 42 Specimens.

The examinations carried out were :—

24 specimens, microscopical examination for Blood, Pus, Amoebæ, Ova and other abnormal constituents.

20 Microscopical Examination for Tubercle Bacilli.

36 Cultural Examination for Bacilli of the Typhoid-paratyphoid groups.

2 for Occult Blood Reaction.

Urine. 289 specimens.

The following examinations were carried out :—

276 General Microscopical Examinations.

247 Microscopical Examination for Tubercle Bacilli.

270 Chemical Examinations.

219 Bacteriological Examinations by Cultural methods.

1 Specimen for Estimation of Lead.

Body Fluids. 114 Specimens.

These included :—

Cerebro-Spinal Fluids. 80 specimens.

These were submitted to the following examinations :—

77 Cytological Examinations.

66 Chemical Examinations.

77 Microscopical Examination for Tubercle Bacilli.

69 Bacteriological Examination by Cultural method.

7 for Wassermann Reaction.

1 for Sugar Estimation.

Pleural Fluids. 26 specimens.

These were all submitted to :—

(a) Cytological Examination.

(b) Microscopical Examination for Tubercle Bacilli.

(c) Bacteriological Examination by Cultural methods.

Fluids from Abdomen and Joints. 8 specimens.

These were all submitted to :—

(a) Cytological Examination.

(b) Microscopical Examination for Tubercle Bacilli.

(c) Bacteriological Examination by Cultural methods.

Pus. 60 specimens.

These were examined as follows :—

- 58 Microscopical Examinations for Cells and Bacteria.
- 56 Microscopical Examinations for Tubercle Bacilli.
- 55 Bacteriological Examinations by Cultural Methods.

Sputum. 111 specimens.

The examinations to which these specimens were submitted were as follows :—

- 105 Examinations for Tubercle Bacilli, of which 47 or 44·7 per cent. gave positive results.
- 32 Microscopical Examinations for elastic tissue, Asbestosis bodies and Bacteria other than Tubercle Bacilli.
- 6 Bacteriological Examinations by Cultural Methods.

Swabs from Throat, Nose and Ear, etc. 186 specimens.

186 swabs for Diphtheria Bacilli examined by cultural method. Positive results were obtained in 12 instances.

Histological Examinations.

119 specimens of tissue were received for Section and Histological Examinations. Slides of the preparations are often returned with the report thereon, when requested.

Uterine and Vaginal Discharges.

34 Specimens were examined bacteriologically by microscopical and cultural methods and hæmolysis tests on isolated streptococci were carried out in 8 cases.

Hairs.

24 specimens of Hairs were examined for Ringworm Fungus and 10 gave positive results.

Miscellaneous Specimens.

These include :—

- 19 Specimens of Stomach contents for Chemical Examination.
- 5 Discharges from Eyes for Examination for Gonococci and other bacteria.
- 3 Preparation of Autogenous Vaccines.
- 2 Animal Inoculation Tests for Tubercle Bacilli.
- 8 Throat Swabs for special Examination for Meningococci or other organisms.

HOUSING.

Table V on page 22a gives particulars of the work carried out under the Public Health and Housing Acts by the Local Sanitary Authorities during the year 1933. The principal items included in that table are compared below with the figures for the year 1932 :—

	1932.	1933.
No. of new houses erected	11,989 ..	14,836
No. of houses inspected for housing defects ..	29,797 ..	37,006
No. of inspections made for the purpose ..	78,912 ..	93,175
No. of houses found to be totally unfit for human habitation	522 ..	1,306
No. of houses found not to be in all respects reasonably fit for human habitation	13,129 ..	16,295
No. of houses rendered fit in consequence of informal action	12,216 ..	12,973

RURAL DISTRICT COUNCILS.

(a) *Returns.* As required by the Housing Act, 1930, each Rural District Council furnished their third return (for the year 1932) in regard to housing conditions of persons of the working classes. A summary of these returns (see Table VI. on page 24a), was submitted to the Sanitary and Health Sub-Committee on 25th May, 1933, when it was resolved that the Clerk of the County Council and County Medical Officer of Health be instructed to arrange for further conferences with Officers of the County Council and Rural District Councils. Such conferences were held in four Rural Districts, resulting in appropriate representations being made to three of them.

(b) *Grants.* In accordance with Section 34 of the Housing Act, 1930, the Rural Districts of Belchamp and Bumpstead claimed that 24 houses and 12 houses respectively, which they proposed to provide, were required for the accommodation of the agricultural population of the district. They therefore applied for the grant of one pound per house which the County Council is required under certain conditions to undertake in respect of each of the forty years next following the completion of the houses. On 3rd October, 1933, the County Council determined that all the 36 houses in question were required for the accommodation of the agricultural population of the districts.

(c) *Programmes.* Under the Housing Act, 1930, power is given to Local Sanitary Authorities to deal comprehensively with bad housing conditions under three broad categories, namely (a) clearance areas; (b) improvement areas, and (c) individual defective houses.

In Circular 1331, dated 6th April, 1933, addressed to Housing Authorities, the Minister of Health stated that " His Majesty's Government have given very careful consideration to a matter that deeply and urgently concerns social welfare, the clearance of slums and the improvement of bad housing conditions." He expressed the opinion that " the present rate at which the slums are being dealt with is too slow and they look for a concerted effort between the central government and the Local Authorities immediately concerned to ensure a speedier end to the evil, and an end within limited time." He requested the preparation and adoption by Local Authorities of programme, such programme to be sent to him on a prescribed form not later than 30 September, 1933.

TABLE VI.

SUMMARY OF RETURNS RECEIVED FROM RURAL DISTRICT COUNCILS IN REGARD TO HOUSING CONDITIONS OF THE WORKING CLASSES.

RURAL DISTRICT.	TOTALLY UNFIT HOUSES.			PARTIALLY UNFIT HOUSES.			ESTIMATED NO. OF HOUSES REQUIRED TO 31ST MARCH, 1934.				PROPOSED NEW HOUSES TO 31ST MARCH, 1934.			
	On 31st December, 1932.		Demolished from 1st April, 1931, to 31st December, 1932.	On 31st December, 1932.		Rendered habitable from 1st April, 1931, to 31st December, 1932.	To meet overcrowding.		To meet normal expansion.		Approved by Minister.		Not yet approved by Minister.	
	Occupied.	Unoccupied.		Occupied.	Unoccupied.		Agricultural Workers.	Others.	Agricultural Workers.	Others.	Agricultural Workers.	Others.	Agricultural Workers.	Others.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Belchamp	9	29	11	19	11	119	—	—	—	—	—	6	—	—
Billericay	56	15	13	27	—	175	1	32	(a)	(a)	—	24	—	74
Braintree	41	24	18	85	—	60	41	30	—	—	—	18	68	16
Bumpstead	14	15	8	46	8	52	12	—	34	—	10	—	2	—
Cbehnstford	7	15	7	24	2	48	—	—	48	60	—	—	(h)	(b)
Dunmow	12	6	7	50	1	95	46	—	31	6	16	—	—	—
Epping	1	10	27	41	1	179	—	—	(c)	(c)	—	—	10	—
Halstead	3 (d)	—	—	1	—	72	—	—	—	—	—	—	—	—
Lexden & Winstree ..	14 (e)	12 (f)	4	81	8	110	—	—	—	—	—	—	—	—
Maldon	7	12	16	21	3	96	3	2	(g)	(g)	—	—	(b)	(h)
Ongar (i)	5	—	—	41	—	—	—	—	20	—	—	—	20	—
Orsett	3	9	7	50	—	271	—	—	—	—	8	20 (j)	—	—
Rochford	7	1	2	40	3	60	13	31	—	—	—	—	—	—
Romford	18	8	3	91	2	77	—	10	—	44	—	42	—	10
Saffron Walden	—	—	2	66 (k)	3 (k)	185 (l)	30	—	10	—	—	—	—	—
Stansted	1	—	1	19	—	7	—	19	—	12	—	14	—	—
Tendring (m)	—	5	4	—	—	2	3	3	11	23	12	18	20	20

NOTES :—

- (a) District mostly residential and the considerable increase of population arises almost entirely from the development of building estates by private enterprise, and the persons occupying the houses on such estates have mostly migrated from other districts. At present no industrial works are known to be contemplated in the district.
- (b) None. Government Subsidies having been discontinued.
- (c) None. The housing needs of the district appear to have been met by the houses provided by the Council.
- (d) In each of these cases a Closing Order has been made which will be enforced when the present very old tenant leaves.
- (e) In one case an undertaking has been given by the Owner under Section 19 of the Act not to let the house.

- (f) In eight cases undertakings have been given by the Owners under Section 19 of the Act not to let the houses. In addition, Closing Orders are in force on twelve houses and Demolition Orders on five houses.
- (g) About seventy houses per annum would be sufficient to meet the needs of the district, and it is probable that the majority of this number will be built by private enterprise. Less than half this number would be required for agricultural workers.
- (h) The matter is under consideration, but no very extensive programme is likely.
- (i) Figures have been supplied in respect of three Parishes only. There are twenty-six Parishes in the District.
- (j) Small bungalows for aged persons (Housing Act, 1930).
- (k) On 31st March, 1933.
- (l) Period 1st April, 1931, to 31st March, 1933.
- (m) Forty-six cottages built during 1932.

The Local Authorities were not required to furnish the County Council with copies of these programmes. The Sanitary and Health Sub-Committee, however, in view of the duties imposed by the Housing Act, 1930, requiring County Councils to have constant regard to the housing conditions of persons of the working classes in Rural Districts, requested every Rural District Council to furnish a copy of the programme sent to the Minister of Health.

A summary of the programmes received before 31st January, 1934, is given in Table VII on page 26, upon which the following notes are submitted :—

(1) *Clearance Areas.*

The Scheme adopted under this heading aims at clearing away existing slums. Only two Rural Districts, namely, Chelmsford and Orsett, have submitted proposals under this heading to undertake the following :—

	Chelmsford Rural.	Orsett Rural.
No. of parishes affected ..	3	1
No. of houses to be demolished ..	18	7
No. of persons to be displaced ..	49	15
No. of new houses to be provided ..	11	6

Braintree Rural District Council state that they are further considering a group of seven cottages as to whether it would not be a better procedure to deal with them as a clearance area or an improvement area.

(2) *Improvement Areas.*

The Scheme adopted under this heading aims at preventing the creation of new slums by stopping the deterioration of areas. Only the Tendring Rural District Council has submitted proposals under this heading for demolishing nine cottages in one parish, the number of persons to be displaced being 29.

(3) *Individual Defective Houses.*

The Schemes adopted under this heading relate to individual defective houses and include proposals under this heading as shown below :—

No. of houses to be demolished ..	630
No. of persons to be displaced ..	1,252
No. of new houses to be provided ..	444*

* This does not include 300 houses which the Tendring Rural District Council propose to erect.

(4) *General.*

The following extracts relating to exceptional matters are taken from the programmes of the Local Authorities concerned :—

Belchamp R. states that they will be prepared to proceed with the erection of 40 further houses, provided they can be built without any loss falling on the rates.

Braintree R. has given a great deal of anxious thought to this subject in consequence of there being so many Council houses, none of which are let at a lower exclusive rent than 4s. per week.

“ The cost of building and the rate of interest on loans has dropped to such an extent since 1930 that to build under the grant earning scheme would necessitate rents at such a low level as to be disastrous to all the present houses.”

The Council considers it desirable to deal with the entire scheme in two years.

Epping R. Two clearance areas, involving the demolition of 19 houses, and the re-housing of 89 persons were dealt with soon after the passing of the 1930 Act. "As the result of the further survey, the Council's Sanitary Inspectors reported that the housing of the Working Classes in this district was of a very fair standard, and they were unable to recommend further action either by Slum Clearance or Improvement Area. Attention was, however, directed to four small areas in various parts of the district, comprising 14 cottages in all which were considered to be nearest the standard requiring some action, and the Council appointed a Sub-Committee to inspect the same with their Sanitary Inspectors and Building Surveyor. This Committee having reported fully thereon, the Council resolved that either the houses in question could be made fit at a reasonable expense or that the owners undertaking to put the property in order to the Council's satisfaction would be accepted."

Saffron Walden R. Schemes are to be carried out during 1933-34 and 1935-36, leaving 1936-37 and 1937-38 for dealing with other properties which may require action by the Council.

Tendring R. The programme submitted by this Council is comprehensive. It shows that the housing work has received careful and systematic attention and it gives a good account of work already done, and to be done, in the way of inspections and the erection of Council houses. It includes illustrations of the type of Council House and Bungalow to be erected.

300 houses are to be built during the five years.

Conclusion. The request of the Ministry of Health for this programme from Local Sanitary Authorities has caused more and closer attention to be paid to the housing conditions of the working classes. The investigations now being carried out by the County Council in the Rural Districts have brought to light the need for this in most of the areas.

(d) *Rural Housing and Unemployment.* On 2nd March, 1933, the County Council appointed a Special Sub-Committee to consider and report upon a letter, dated 6th February, 1933, and accompanying memorandum from the County Councils Association, on the subject of unemployment. In respect to housing, this Special Sub-Committee considered whether any steps could usefully be taken to encourage and expedite schemes of rural housing and whether something could not be done by the County Council to assist in relieving the pressure upon rural housing accommodation. The following recommendations were approved by the County Council on 4th April, 1933 :—

(a) That it be referred to the Public Health and Housing Committee to consider the question of convening a conference of Rural District Councils in the County for the purpose of ascertaining to what extent schemes of rural housing can be undertaken or expedited for the relief of unemployment.

SUMMARY OF REPLIES regarding Water Supplies received towards the end of 1933 from Local Medical Officers of Health for Rural Districts in the Administrative County of Essex.

(Note.—“ Public Supply ” includes supplies from public mains to houses, standpipes, shallow wells, deep wells, springs, and other sources provided by the Rural Council or Water Company, whether for a portion or the whole of each Parish).

Rural District.	Population Estimated 1932.	Total No. of Parishes.	No. of Parishes with		No. of Parishes without Public Supply.	No. of Parishes where Public Supplies.			Remarks.
			Public Piped Supply.	Other Public Supply.		Were maintained.	Were depleted.	Failed wholly or partly.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Belchamp ..	3,978	18	—	13	5	5	6	2	Supplies fairly well maintained, except in Parish of Middleton, where R.D. Council is considering a water scheme.
Billerioay ..	41,980	24	24	—	—	24	—	—	Fully maintained; except in isolated cases, water supply is sufficient.
Braintree ..	21,580	23	8	14	1	15	7	—	No complaints of complete failure. No record of depletion in public deep wells.
Bumpstead ..	2,289	6	1	5	—	6	—	—	Piped supply being provided in one parish; scheme for two other villages under consideration.
Chelmsford ..	28,790	28	14	14	—	11	15	2	Ministry of Health asked for sanction to borrow £525 for works of water supply in seven parishes.
Dunmow ..	15,960	25	4	16	5	16	2	2	Level of water in borehole in one parish has fallen from 117ft. 8ins. to 114ft. below surface since 1925. Better provision needed in 7 Parishes.
Epping ..	17,610	15	15	—	—	15	—	—	
Halstead ..	9,695	16	5	11	—	14	2	—	
Lexden & Winstree ..	19,130	34	10	8	16	15	—	3	All areas will have a plentiful supply of water when all the Council's water schemes are completed.
Maldon ..	16,340	32	19	11	2	13	16	1	Supplies augmented from Water Co.'s mains. Scheme for providing piped supply to five parishes at a cost of £10,300 before Ministry of Health.
Ongar ..	11,840	26	9	11	6	20	—	—	Numerous shallow wells run dry or became insufficient—since recovered.
Orsett ..	21,560	13	12	—	1	11	—	1	During drought, applications for main supply to existing houses were numerous.
Rochford ..	17,500	18	13	1	4	14	—	—	
Romford ..	16,450	7	7	—	—	7	—	—	Wells supply houses in outlying parts, but no complaint has been made.
Saffron Walden ..	9,655	25	4	16	5	9	9	2	Supplies are inadequate in 21 Parishes. Scheme for extending mains under consideration.
Stansted ..	7,043	10	5	3	2	4	3	1	Supplies are inadequate in five parishes.
Tendring ..	24,900	27	22	5	—	26	—	1	
Totals ..	286,300	347	172	128	47	225	60	15	

(b) That it be referred to the Committees of the Council concerned to consider the question of undertaking in rural areas the housing of County Council employees under their control.

With regard to recommendation (b), the Public Health and Housing Committee, with the approval of the County Council, decided to erect 6 cottages at the Black Notley Sanatorium and 2 cottages at the Harold Court Sanatorium.

As desired by recommendation (a) a Conference with representatives of Rural District Councils was held at Essex House on 13th June, 1933. The Rural Councils were congratulated upon the splendid work carried out in the past, particularly in the provision of Council Houses, over 5,400 having been erected since 1919. An appeal was made to the Rural Councils to renew their building activities, primarily to meet housing needs, but also to help in alleviating unemployment and thereby reduce the large amount now expended on public assistance.

Reference was made to a memorandum which had been prepared by the County Accountant on the various methods by which Local Authorities may provide or assist in providing houses for the working classes. It was decided that copies of this memorandum be circulated to the Rural District Councils.

TOWN PLANNING.

TOWN PLANNING SCHEMES. Formal notification was received during the year from the Minister of Health of his approval to the following Town Planning Schemes for the County which were completed before the date of the operation of the Town and Country Planning Act, 1933 :—

Chelmsford Rural District Town Planning Scheme No. 1 (Runwell).

Chingford Urban District Town Planning Scheme.

Ilford Town Planning Scheme.

Southend-on-Sea (North Western) Town Planning Scheme.

MID-ESSEX REGIONAL PLANNING COMMITTEE. The County Council entered into an agreement with the Borough Councils of Chelmsford and Maldon, the Urban District Councils of Brentwood and Burnham-on-Crouch, and the Rural District Councils of Illicicay, Chelmsford and Maldon for the constitution of a Joint Statutory Regional Planning Committee.

WEST ESSEX ADVISORY JOINT TOWN PLANNING COMMITTEE. In January, 1933, this Committee published its report entitled "West Essex.—A Survey with some proposals for its Regional Development." The Technical Consultant was Professor D. Adshead. The report deals with the area in a comprehensive manner, and on pages 76-103 sets out recommendations in respect to open spaces, industries, the Lee Valley and the Roding Valley. In the Preface, the Chairman of the Committee, Mr. Col. Edward North Buxton, urges "every lover of West Essex to study it in the spirit in which it has been evolved and so go forward in co-operation with its neighbours to an orderly development of our environment."

ESSEX COUNTY COUNCIL ACT, 1933. Under Part X of this Act, useful powers have been obtained which should prove of great assistance to the County Council and Local Authorities in regard to roads, town planning and amenities. Reference is made on page 47 to two of the Sections in this Part of the Act dealing with "Means of Access to Buildings," and "The Prohibition on use on unsuitable land for the erection of dwelling houses."

TABLE VII.

SUMMARY OF HOUSING PROGRAMMES AND TIME TABLE OF ACTION TO BE TAKEN IN FIVE-YEAR PERIOD.

RURAL DISTRICT.	CLEARANCE AREAS.			IMPROVEMENT AREAS.			INDIVIDUAL HOUSES.			Remarks.
	Houses to be demolished.	Persons displaced.	New houses proposed.	Houses to be demolished.	Persons displaced.	Houses demolished.	Persons displaced.	New houses proposed.		
Belchamp ..	—	—	—	—	—	29	18	?	(1)	
Billericay ..	—	—	—	—	—	100	302	97		
Braintree ..	One group of 7 cottages under consideration.	—	—	—	—	192*	532	102		
Bumpstead ..	—	—	—	—	—	28	100	28	(2)	
Chelmsford ..	18	49	11	—	—	29	85	16		
Dunmow ..	—	—	—	—	—	85	—	85		
Epping ..	—	—	—	—	—	—	—	—	(4)	
Halstead ..	—	—	—	—	—	31	59	6		
Lexden & Winstree ..	—	—	—	—	—	—	—	—		
Maldon ..	—	—	—	—	—	34	65	—	(3)	
Ongar ..	—	—	—	—	—	?	?	48		
Orsett ..	7	15	6	—	—	8	22	7		
Rochford ..	—	—	—	—	—	—	—	—	(3)	
Romford ..	—	—	—	—	—	12	29	8		
Saffron Walden ..	—	—	—	—	—	57	?	41		
Stansted ..	—	—	—	—	—	7	23	6	(3)	
Tendring ..	—	—	—	9	29	18	17	?		
Totals ..	25	64	17	9	29	630	1,252	444		

* 90 repairable cottages to be dealt with if owners fail to repair.

(1) 40 houses will be built, provided loss does not fall on Rates.

(2) 40—50 houses to be built to let at economic rents.

(3) 300 houses are to be built during the five years.

(4) Information as to new houses proposed to be supplied at a later date.

HOUSING (RURAL WORKERS) ACT, 1926.

The information given below has been kindly supplied by the County Land Agent.

The number of requests for Forms of Application during the year 1933 was 74. 51 Forms were returned, relating to 127 cottages.

The Districts in which the cottages are situate are as follows :—

District.	No. of Applications.	No. of Cottages.	No. of Cottages in respect of which Grants have been made.		Total Grants in the year.		
					£		
Belehamp R.	.. 6	.. 20	.. 13	..	1,163		
Billerieay R.	.. 4	.. 6	.. 6	..	435		
Braintree R.	.. 2	.. 5	.. 5	..	500		
Chelmsford R.	.. 10	.. 27	.. 19	..	1,461		
Dunmow R.	.. 1	.. 2	.. —	..	—		
Halstead R.	.. 6	.. 12	.. 10	..	741		
Lexden & Winstree R.	2	.. 4	.. 4	..	331		
Maldon R.	.. 2	.. 2	.. 1	..	100		
Ongar R.	.. 8	.. 17	.. 8	..	799		
Orsett R.	.. 1	.. 2	.. —	..	—		
Rochford R.	.. 2	.. 5	.. —	..	—		
Saffron Walden R.	.. 1	.. 12	.. 12	..	682		
Stansted R.	.. 1	.. 4	.. 4	..	216		
Tendring R.	.. 4	.. 7	.. 4	..	356		
Burnham-on-Crouch U.	1	.. 2	.. 2	..	200		
	51	.. 127	.. 88	..	£6,984		

Of the cottages included in the above applications, 88 were approved for grants as above, 9 were withdrawn and 30 were still under consideration at the end of the year.

The total number of cottages approved for re-conditioning under the Act in Essex up to the 31st December, 1933, is 355.

Particulars of three typical cases of Cottages re-constructed or improved by grants made by the Conneil under the Act during 1933 :—

1. *Parish of Shellow Bowells.*

Pair of timber-built, plaster and thatched Cottages. Roofs stripped and tiled, external walls re-plastered and boarded. Two new additions at rear, to provide sculleries and food stores, with bedrooms over. Two new chimneys at each end.

Grant made to owner	£200
---------------------	----	----	----	------

2. *Parish of Gestingthorpe.*

A row of seven Cottages, part timber and plaster, part thatch and part tiled. Converted into six cottages. Roofs re-formed and tiled. New windows, new front and back entrances, new floors throughout and new staircases. New additions at rear to provide scullery with bedroom over for each cottage.

Grant made to owner £600

3. *Parish of White Colne.*

A row of four brick and slated cottages. Cottages underpinned, new foundations and slate damp course inserted. External walls plastered, brick floors taken up and re-laid. Ceilings covered with fibre board. New lean-to additions to provide food store, porch and w.c. to each cottage. New drains laid and connected to sewer and water supply connected to sinks and w.c.'s. Two detached wash-houses erected for joint user.

Grant made to owner £194

SEWAGE WORKS AND RIVERS POLLUTION.

LOANS. During the year two Municipal Boroughs, two Urban District Councils and four Rural District Councils made application to the Ministry of Health for sanction to borrow sums of money, a gross total of £243,388, for works of sewerage and/or sewage disposal. Public inquiries were held on the dates shown in the following table :—

Date of Inquiry.	Local Sanitary Authority.	Parish.	Catchment Area.	Loan required.	Purpose.
1933.				£	
Mar. 9th ..	Braintree R.D.	Hatfield Peverel	Blackwater	18,100	Sewerage and sewage disposal.
April 5th..	Brentwood U.D.	Brentwood	Ingrebourne	26,447	" "
April 5th..	Billericay R.D.	South Weald and Shenfield	Ingrebourne	13,223	" "
Aug. 10th	Tendring R.D.	St. Osyth	Sea	2,190	" "
Sept. 26th	Woodford U.D.	Woodford	Roding	11,935	" "
Oct. 25th	Bumpstead R.D.	Steeple Bumpstead	Stour	2,993	" "
Nov. 10th	Walthamstow B.	—	Lee	36,000	Sewerage.
Nov. 23rd	Colchester B.	—	Colne	132,500	Sewerage and sewage disposal.
			Total ..	£243,388	

INSPECTIONS. Table VIII on page 30 records the number of visits paid to sewage works by the County Health Inspector and the number of samples obtained. Improvements to certain sewage works notably in the Ingrebourne and Roding Catchment areas are being or are about to be carried out.

ESSEX COUNTY COUNCIL ACT, 1933. This Act came into force on 18th July, 1933, and Part III makes provision for the protection of streams and the prevention of pollution.

Sections 21-26, with the appropriate "savings" included in Sections 31-53, aim at securing further protection of the rivers in the County. This is important in a County like Essex where four of the rivers are being utilised for public water supplies. The Sections apply to the whole of the Administrative County excepting the River Thames, River Lee, River Stour (part), and the Boroughs of Barking and Ilford—see Section 14.

Section 21 amplifies the powers included in the Rivers Pollution Prevention Acts, 1876 and 1893 (under which Local Sanitary Authorities have powers similar to those vested in County Councils).

Under Section 21 it is an offence for any person, without lawful excuse (a) to open into any stream any sewer, drain, pipe or channel whereby sewage or any offensive or injurious matter (whether solid or fluid) shall or is likely to flow or pass into such stream; (Note.—This power was vested in the Lee Conservancy Board in 1868, but was not included in the Rivers Pollution Prevention Acts). (b) To wilfully cause or knowingly suffer any sewage or any offensive or injurious matter (whether solid or fluid) to flow or pass into any stream. (Note.—The expression "Offensive or injurious matter" is not included in the Rivers Pollution Prevention Acts. Penalties heavier than those included in the Rivers Pollution Prevention Acts can be applied).

Section 24 is new, and should be read in conjunction with the protective Sections Nos. 36 and 37. Experience has shown that the discharge into streams of heated fluids in large quantities has produced unnatural conditions, *e.g.*, deprivation of oxygen, growth of bacteria, and profuse growth of algoid and fungoid matter. It is now an offence for any person to raise the temperature of a stream more than $7\frac{1}{2}$ degrees centigrade at a point 200 yards below the point of discharge, *i.e.*, after complete admixture.

Section 26 makes it an offence to discharge into a stream gravel, stones, earth, mud, ashes, dirt, soil or rubbish so as to impede the flow or be detrimental to the purity of the water.

Section 52, Sub-section (2) states that "nothing in this part of this Act shall prejudice or affect or curtail the right of any Sanitary Authority to continue or to commence proceedings under any public Act against any person in respect of any 'pollution of any stream.'" Under Section 53, Local Authorities have power to contribute towards any expenditure incurred by the County Council in carrying into execution any of this Part of the Act.

SEWAGE DISPOSAL IN SOUTH-WEST AND SOUTH ESSEX. On 12th January, 1933, a special report was presented to the Sanitary and Health Sub-Committee, calling attention to the extensive building developments in South-West and South Essex during

TABLE VIII.

SHOWING SEWAGE WORKS, NUMBER OF VISITS, AND NUMBER OF SAMPLES TAKEN DURING THE YEAR 1933.

Catchment Area.	Sewage Works.	Sanitary District.	No. of Visits.	Samples taken.		
				No. satisfactory or on border line.	No. unsatisfactory.	Total.
Brain ..	Braintree ..	Braintree U...	4	1	3	4
Blackwater ..	Silver End ..	Braintree R...	1	1	—	1
Cam ..	Saffron Walden ..	Saffron Walden B. ..	1	—	1	1
Chelmer ..	Chelmsford ..	Chelmsford B. ..	3	1	2	3
	Dunmow ..	Dunmow R. ..	1	1	—	1
	Felstead ..	Dunmow R. ..	4	1	3	4
	Thaxted ..	Dunmow R. ..	1	1	—	1
Colne ..	Halstead ..	Halstead U. ..	1	1	—	1
	Sible Hedingham ..	Halstead R. ..	1	1	—	1
	Tiptree ..	Maldon R. ..	2	2	—	2
Crouch ..	Great Burstead ..	Billericay R. ..	2	2	—	2
Ingrebourne ..	Brentwood Joint ..	{ Brentwood U. Billericay R. }	1	1	—	1
	Brook Street, South Weald ..	Billericay R. ..	1	1	—	1
	Upminster ..	Romford R. ..	1	—	1	1
Mardyke ..	Bury Farm, Great Warley ..	Romford R. ..	2	2	—	2
	South Ockendon ..	Purfleet U. ..	2	2	—	2
Roding ..	Abridge ..	Ongar R. ..	2	1	1	2
	Buckhurst Hill ..	Buckhurst Hill U. ..	2	2	—	2
	Chigwell ..	Epping R. ..	1	—	—	—
	Chigwell Row ..	Epping R. ..	1	1	—	1
	Epping.. ..	Epping U. ..	1	—	1	1
	Grange Hill ..	Epping R. ..	3	1	2	3
	Hainault ..	Ilford B. ..	1	—	—	—
	Loughton ..	Loughton U. ..	3	2	—	2
	Moreton ..	Ongar R. ..	1	—	1	1
	North Weald ..	Epping R. ..	1	1	—	1
	Ongar ..	Ongar R. ..	2	1	1	2
	Theydon Bois ..	Epping R. ..	1	1	—	1
	Thornwood ..	Epping R. ..	1	1	—	1
	Wanstead ..	Wanstead U. ..	1	2	—	2
	Woodford ..	Woodford U. ..	2	2	—	2
Rom ..	Hornchurch ..	Hornchurch U. ..	1	—	1	1
Wid ..	Billericay ..	Billericay R. ..	2	2	—	2
	Great Warley ..	Romford R. ..	1	1	—	1
	Shenfield, Hutton and Ingrave ..	Billericay R. ..	2	2	—	2
Samples from rivers, streams, ditches, &c. ..			57	38	17	55
Trade effluents ..			9	6	2	8
			14	23	8	31
Total ..			80	67	27	94

recent years, necessitating considerable capital outlay on improvements and extensions to most of the existing sewage works. Some of the sewage works are still inadequate and others are being taxed to their fullest capacity. The part of the Administrative County of Essex under consideration has 51 sewage works and an area of 450 square miles, and a population at the 1931 census of 433,973, excluding the Boroughs of Barking, Ilford, Leyton and Walthamstow, where arrangements have been made for the reception of the drainage into the London system.

It was recommended that the time was opportune for obtaining a comprehensive report from a Consulting Engineer. On 4th July, 1933, the County Council approved of this recommendation and directed Mr. E. H. Tabor, M.Inst., C.E., to enquire into and report upon the present arrangements of sewage disposal in the Epping, South Western, South Eastern and Southern Guardians Committee Areas, and the Rural District of Billericay, the anticipated adequacy of such arrangements for the next ten years, and to intimate in what way co-operation can be secured between Local Sanitary Authorities in regard to the establishment of larger and more economical Sewage Disposal Works.

The streams in the region under review are Lee and Stort, Roding, Rom and Beam, Ingrebourne, Mar Dyke, Wid, Crouch and Roach, and Thames, its estuary and creeks.

The investigation was completed at the end of 1933, Mr. Tabor presenting his "Report on Sewage Disposal in South-West and South Essex" to the Public Health and Housing Committee on 8th March, 1934. The following extracts are taken from the "summary and conclusions" on page 13 of the Report:—

"In compliance with the instruction of the County Council, I have inspected the arrangements for sewage disposal in the area referred to me, and have described generally the characteristics and capacities of the various works.

"As stated previously, there are at present 51 sewage works in the area reviewed. If all the schemes now being prepared or discussed are carried out, this number will be reduced by nine. At the same time, developments at Laindon, Pitsea and Vange necessitate the construction of two additional works.

"In my opinion, the part of the County inspected is, on the whole, well served in respect of sewage disposal. The works are largely modern and well managed and produce good effluents. These observations apply especially to the southern and eastern parts of the area where present arrangements, with additions as and when required, should be adequate for more than ten years. The works in the northern part of the area in the upper parts of the Lee, Roding, Ingrebourne and Wid Valleys should be similarly adequate.

"With reference to the western districts, it will have been gathered from preceding pages that existing arrangements are hardly adequate for ten years in the lower Roding Valley, and that the suitability of the Romford Works in the future, not necessarily limited to a period of ten years, is doubtful.

"It appears to me, therefore, that as regards these two areas, the Authorities concerned might seriously consider the possibilities of adopting a large scheme or schemes of the disposal of sewage by removal to and treatment in the vicinity of the Thames, such as have been outlined in this report.

"Reference has been made to the probable reduction in the number of sewage works. It may be thought that such reduction might well be carried further, but it must be borne in mind that frequently in the case of fairly widely separated communities such as those in much of the area under consideration, concentration of the sewage disposal of several towns or

'villages at one works could not be justified financially. It is true that a large works is 'relatively less expensive to maintain than small ones, but the difference is not very great, and 'may easily be out-weighed by heavy debt charges on communicating sewers.

'In regard to co-operation between Local Sanitary Authorities, it is clear that such 'co-operation is often beneficial and if agreement can be reached there should be little difficulty 'in making arrangements for combined action by Joint Committees or otherwise.

'There can be no doubt that any Sanitary Authority, before developing a sewerage 'or sewage disposal scheme in detail, should consider whether joint action with neighbouring 'Authorities is practicable and desirable, and in any such case the Authority would be well 'advised to take steps to obtain an indication of the views of the Ministry of Health upon the 'matter at an early stage."

It will be observed that Mr. Tabor has drawn particular attention to the inadequacy of arrangements in the lower Roding Valley. The Committee therefore are arranging to invite the Urban District Councils of Woodford & Wanstead and Chigwell to appoint representatives to confer with members of the Committee on the matter.

FOOD AND DRUGS.

As mentioned in the Annual Report for the year 1932, consequent upon the retirement of one of the three Chief Inspectors of Food and Drugs, the districts were re-arranged and the County is now divided into only two areas for the sampling of Food and Drugs, namely, Eastern District and Western District. The figures given below have been kindly supplied by the County Analyst, Dr. Bernard Dyer, 17, Great Tower Street, London, E.C., and relate to the year 1st December, 1932, to 30th November, 1933 :—

Samples taken from Vendors.	Samples Analysed.	Samples Unsatisfactory.	Percentage of Unsatisfactory Samples.
Eastern District of the County ..	1,354	63	4.65 (3.4)
Western District of the County ..	2,367	54	2.28 (2.2)
Chingford Urban District Council	9	1	3.18 (3.9)
Walthamstow Borough ..	105	3	
Wanstead Urban District Council	43	1	
	3,878	122	3.15

"Appal to Cow" Samples.

Eastern District of the County ..	70
Western District of the County ..	60
Private Samples ..	2
Total ..	4,010

The comparable percentages of Unsatisfactory Samples for the year 1932 are given in brackets and it will be noted that there has been a considerable increase during the past year.

In reviewing the year's work Dr. Dyer mentions the following :—

MILK. 1314 samples were examined and 77 were found unsatisfactory. Of these, 36 samples contained added water in proportions varying from 3 per cent. to 33 per cent., while 41 samples were deficient in fat to an extent varying from 4 per cent. to as much as 75 per cent. of the minimum quantity of fats in normal milk. One sample sold as skim milk contained as much as 79 per cent. of water.

SUET. Seven samples were reported as unsatisfactory. One was a sample sold as "chopped" suet which contained 18 per cent. of flour, the presence of which was undeclared to the purchaser.

The other 6 samples were of what is known as "shredded" suet, that is suet mixed with rice flour to preserve its physical condition, which is legitimate as long as due declaration is made of the presence of the flour, and as long as the quantity thereof is not excessive. In one of these cases the admixture of rice flour was not declared to the purchaser. In four cases, although the presence of flour was duly declared, the samples were found to contain an excessive quantity thereof as compared with what is now, by general consensus of opinion, regarded as the maximum quantity necessary for satisfactorily preserving the physical condition of the shredded suet. In one other case the suet was found to contain a substantial admixture of shredded coconut, the presence of which, however, was traced to accident.

SAUSAGES. Eleven samples of sausages not sold as "preserved" were found to contain preservative in the usual form of sulphur dioxide. The quantity present, however, was in no case more than would have been legitimate had due declaration of its presence been made to the purchaser.

One sample, however, contained a small quantity of boric acid, the presence of which in any case is inadmissible.

BREAD. A sample of bread was found to contain a large number of particles of finely broken glass, suggestive of the possibility of fragments of a broken electric light bulb having found their way either into the flour or into the dough during course of its preparation.

FLOUR. A sample of flour was found to contain 2 per cent. of "soap flakes," obviously the result of an accident.

VINEGAR. Six samples were found to be deficient in acetic acid.

BEER. A sample sold as "beer" was found to be not beer but a non-alcoholic imitation thereof, containing, however, nothing injurious.

MILK SUPPLY.

Veterinary Service.

On 23rd June, 1933, members of the Public Health and Housing Committee and of the Diseases of Animals Sub-Committee met to confer upon the question of veterinary service, and the following recommendations were approved by the County Council on 3rd October, 1933 :—

That in the opinion of this Conference the time has arrived when the County Council should authorise the Diseases of Animals Sub-Committee to appoint a whole-time Chief Veterinary Officer for the purpose of organising and superintending the duties of the Council's Veterinary Officers and generally advising the Council and the appropriate Committees thereof on matters relating to the Council's Veterinary Service.

That a joint Advisory Sub-Committee of the Diseases of Animals Sub-Committee and the Public Health and Housing Committee be constituted by those Committees for the purpose of selecting, in order of merit, three suitable candidates for the appointment of Chief County Veterinary Officer.

That the Joint Advisory Committee be authorised to consider and watch the progress of the work and make such recommendations to the respective Committees as from time to time may seem necessary.

Mr. F. W. Medlock, M.R.C.V.S., was appointed Chief Veterinary Officer and took up duty on 19th February, 1934.

Milk and Dairies (Consolidation) Act, 1915.

No routine inspections of dairy herds by Veterinary Surgeons were undertaken during 1933, the activities being limited to the taking of samples of milk by the County Food and Drugs Inspectors and the County Health Inspector for biological examination.

Biological Examinations. Out of 443 samples, 49 (or 11.0 per cent.) were found to contain tubercle bacilli. There were in addition 17 inconclusive tests owing to deaths of guinea pigs from intercurrent infection.

There was a marked increase in the number of samples found to contain tubercle bacilli, the percentage for 1932 being 6.4. This may be due to the fact that the samples in 1933 were largely obtained direct from the producers and were made as representative as possible of the supply from the particular farm. An effort was also made to obtain samples from producers whose supplies had not been sampled previously.

The 49 positive samples were obtained from 45 farms. Each dairy herd at these farms was inspected by the County Council's appropriate part-time veterinary surgeon with the following results :—

- (i) 58 cows from 38 farms were slaughtered under the Tuberculosis Order, 1925, 24 being in an advanced stage of tuberculosis, and 34 not in an advanced stage of tuberculosis.
- (ii) 16 cows had been disposed of otherwise at 7 farms.

SECTION 4. During the year 10 notifications were received under Section 4 of the Milk and Dairies (Consolidation) Act, 1915, to the effect that biological examinations of samples of milk from 12 farms within the County of Essex had revealed the presence of tubercle bacilli. Each dairy herd at these 12 farms was inspected by the County Council's appropriate part-time Veterinary Surgeon with the following results :—

- (i) 11 cows from 7 farms were slaughtered under the Tuberculosis Order, 1925, 3 being in an advanced stage of tuberculosis, and 8 not in an advanced stage of tuberculosis.
- (ii) At 3 farms, the supplies from which were part of a mixed sample from 4 farms, the Veterinary Surgeons failed to find any cow suffering from tuberculosis. In regard to the remaining 2 farms, the Veterinary Surgeons visited the farms under the Tuberculosis Order, 1925, soon after the samples were taken, and as a result 4 cows from 1 farm and 2 cows from the other farm were slaughtered.

Milk and Dairies Order, 1926.

The local Sanitary Inspectors in seven Urban Districts and five Rural Districts took advantage of the County Council's laboratory facilities by submitting 121 samples of milk to microscopical examination; none of these samples were found to contain acid-fast bacilli indistinguishable from the tubercle bacilli. Microscopical examination of bulk milk samples is not likely to be of much use in respect to the discovery of the tubercle bacillus. These samples were also submitted to the coliform bacteria test, and in 14 samples (11.6 per cent.) coliform bacteria were not absent in 1/1000th cubic centimetre, arbitrarily adopted for the present as an easily attainable standard of cleanliness.

Milk (Special Designations) Order, 1923.

The following licences to produce graded milks were in operation during the year 1933 :—

Kind.	No.	Granted by.
Certified Milk	5	Ministry of Health.
Grade A. (Tuberculin Tested) Milk ..	21	Ministry of Health.
Grade A. Milk	44	County Council.
—		
Total	70	
—		

GRADE A MILK. Ninety-seven visits were paid by the County Health Inspector to farms licensed to produce Grade A Milk, where 80 samples were obtained. The results obtained may be regarded as satisfactory.

Tuberculosis Order, 1925.

The Agricultural Committee are responsible for the administration of this Order, and have again taken steps to eliminate and slaughter tuberculous cows, as will be seen from the following figures which have been furnished by the Clerk of the County Council :—

	1932.	1933.
No. of animals examined by Veterinary Surgeon ..	41,776 ..	45,391
No. of animals slaughtered under the Order ..	1,130 ..	1,366
No. of such animals found on post-mortem to be—		
(a) Not tuberculous	Nil ..	Nil
(b) Tuberculous—not advanced	721 ..	829
(c) Tuberculous—advanced	409 ..	537
Compensation paid by County Council ..	£6,470 ..	£7,385
Salvage	£1,345 ..	£1,521

WATER SUPPLIES.

During the year one Borough Council and three Rural District Councils made application to the Ministry of Health for approval to loans for works of water supplies, and in consequence public enquiries were held on the dates shown below :—

Date of Inquiry.	Local Sanitary Authority.	Parish.	Amount of loan.	Purpose.
March 1st, 1933	Maldon B.	Maldon	£ 5,850	Water supply.
March 9th, 1933	Braintree R.D.	Hatfield Peverel and and Terling	15,800	" "
Sept. 14th, 1933	Bumpstead R.D.	Steeple Bumpstead Helions Bumpstead	2,820 270	" " "
Oct. 11th, 1933	Maldon R.D.	Heybridge Great Totham Little Totham Tolleshunt Major Wickham Bishops	324 4,151 938 1,146 3,741	" " " " " "
			£35,040	

During 1933, another prolonged drought occurred in Essex, as will be seen from the following particulars regarding rainfall in inches recorded at the County Meteorological Station at Chelmsford. For comparative purposes, figures are given also for the year 1932 :—

			Rainfall in inches.	
			Chelmsford.	
Month.			1933.	1932.
January	..	..	1.21	1.15
February	..	..	1.14	0.23
March	..	..	1.64	1.10
April	..	..	0.76	1.96
May..	..	..	1.42	3.69
June	..	..	1.09	0.60
July	..	..	0.93	2.14
August	..	..	0.37	1.09
September	..	..	1.85	1.77
October	..	..	1.53	4.90
November	..	..	1.15	1.12
December	..	..	0.55	0.33
Totals	..	..	13.64	20.08

The average rainfall for the ten years 1924 to 1933 was 23.44 inches at Chelmsford.

It will be seen that at Chelmsford 6.44 inches less rain fell in 1933 than in 1932. This is the lowest rainfall recorded since the year 1921, when the rainfall for the whole year was 12 inches. These exceptional conditions made it desirable to repeat on 25th

September, 1933, the enquiry made in 1929, when a questionnaire was addressed to the Medical Officers of Health for the seventeen Rural Districts in Essex in respect to sources of public supply, and as to whether those supplies had failed, been depleted, or been maintained.

For the purpose of this report, the term "public water supply" includes supplies provided by the Rural Councils or Water Companies from public mains to houses or standpipes, shallow wells, deep wells, springs, &c. It will be realised that parishes vary, some being scattered, whilst others have centres of population with outlying farms and houses. A public supply, whether from mains, wells or springs, often serves only a relatively small group of cottages, but it has been assumed to be a public water supply for the whole parish. No data are available showing how many houses in each Parish depend entirely on private water supplies.

A summary of the replies received towards the end of 1933 from the local Medical Officers of Health, including other appropriate information, is given in Table IX on page 38a. The position in 1933 is compared below with the circumstances prevailing in 1929 :—

	1929.		1933.
Parishes with a piped water supply, chiefly in populous parts, from public mains ..	152	..	172
Parishes with other sources of public water supply, <i>e.g.</i> , shallow wells, springs, &c. ..	122	..	128
Parishes without a public water supply and dependent upon private wells, springs, ponds, rainwater, &c. ..	73	..	47
	—		—
Total No. of Parishes ..	347	..	347
	—		—

It will be seen that the number of Parishes without a public supply has been reduced by 26. The present return indicates that 13.5 per cent. of the parishes in the rural districts are without a public supply of any kind, and are dependent entirely on shallow wells, rainwater, springs and ponds; the areas chiefly affected being Lexden and Winstree (16 Parishes), Ongar (6), Belchamp (5), Dunmow (5) Saffron Walden (5), Rochford (4),.

As regards the public water supplies, the position in 1933 is compared below to the circumstances prevailing in 1929 :—

	1929.		1933.
No. of Parishes where the public water supply failed wholly or partly ..	6	..	15
No. of Parishes where the public water supply was depleted ..	23	..	60
No. of Parishes where the public water supply was maintained..	245	..	225

It will be observed that in 1933 there were 9 more parishes where the public water supply failed wholly or partly, and 37 more parishes where the public water supply was depleted.

According to notices in the press, the Government have in mind setting aside one million pounds to be available for grants for the provision of water supplies in rural districts. Particulars regarding the conditions of these grants have not yet been received. Meanwhile, several Rural District Councils are making good efforts to provide further public supplies in their areas, notably Bumpstead R., Chelmsford R., Lexden & Winstree R., Maldon R., and Saffron Walden R.

By Circular No. 1338, dated 12th May, 1933, the Minister of Health stated that he was anxious "that every effort should be made towards the improvement of rural water supplies.What is needed is that a thorough survey of rural areas should be made by the Authorities concerned, in order that reliable information may be obtained as to the conditions of existing supplies and the availability of new supplies, and consideration given to the improvement of conditions.County Councils might well take an active part with the Rural District Councils in initiating and carrying out surveys and in setting up, in suitable cases, joint advisory committees.The Minister feels sure that a thorough investigation will show that much can be done for improving rural water supplies within local financial resources, particularly if County Councils and Rural District Councils make, as he trusts they will, generous use of their powers of contributing to the cost." In respect to the last-mentioned, the County Council, at their meeting on 23rd October, 1933, approved of the scheme put forward by the Public Health and Housing Committee for the making of contributions under Section 57 (1) of the Local Government Act, 1929 (see page 12).

In 1926, Mr. J. Mackworth Wood, M.Inst., C.E., at the request of the Essex County Council, prepared a report on "The Water Supplies of Essex," but this was mainly concerned with the piped water supplies provided by Local Sanitary Authorities or Water Companies. Reference is made on pages 69 to 71 to the areas at present not supplied by any undertakers, and certain suggestions (some of which have been adopted already) are put forward for the benefit of those areas.

Reference must also be made to the greater demands on the public water supplies, due to the large increase in population in the south-western and southern parts of the County. The South Essex Waterworks Co. and the Southend Waterworks Co. have augmented their supplies by obtaining powers to abstract water from four rivers in the County. Should the rate of increase in population be maintained during the next ten years, these Waterworks Companies may be faced with a difficult position.

Consideration might also be given to the recommendations made by Mr. J. Mackworth Wood in the above-mentioned report regarding the necessity for gauging the flow of the various rivers in the County over a prolonged period. The County Council, at their meeting on 6th July, 1926, approved of the Parliamentary Committee's recommendation that they be authorised to undertake the gauging of the Rivers Cam, Colne, and Stour, but that such authorisation be limited in the first instance to the gauging of the River Stour. During the early part of last year, gauging of the River Chelmer were needed in connection with the promotion of the Essex County Council's Bill. It is important that the County Council should know the flows of the various rivers in the County, as the information would be of inestimable value if and when further sources of water supply have to be obtained.

TABLE XVI.

(a) PULMONARY TUBERCULOSIS.

Table showing in summary form (a) the condition at the end of 1933 of all patients remaining on the Dispensary Register; and (b) the reasons for the removal of all cases written off the Register. The Table is arranged according to the years in which the patients were first entered on the Dispensary Register as definite cases of pulmonary tuberculosis, and their classification at that time.

Condition at the time of the last record made during the year to which the Return relates.		Previous to 1926.					1926.					1927.					1928.					1929.					1930.					1931.					1932.					1933.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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		Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)	Group 1.	Group 2.	Group 3.	Total (Class T.B. Plus.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
(a) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults. M.	130	24	49	6	79	30	10	10	3	23	19	10	14	3	27	18	8	10	2	20	19	10	8	...	18	27	7	10	1	18	28	9	11	...	20

The prolonged drought has caused shortage of water in many parishes. Efforts are being made by some of the Rural District Councils to augment existing supplies and provide additional supplies. The following recommendations were submitted to the Sanitary and Health Sub-Committee on 11th January, 1934 :—

- (a) The need for initiating and carrying out a thorough survey of the rural areas by an experienced Water Engineer, in order that reliable information may be obtained as to the conditions of existing supplies, and the availability of new supplies, and recommendations made regarding the improvement of conditions.
- (b) The need for consulting the Water Undertakers in the County regarding further sources of water supplies in view of the increase in population.
- (c) The need for the gauging of the various rivers of the County over a prolonged period.

On 6th March, 1934, the County Council approved of the recommendation of the Public Health and Housing Committee to appoint a Water Engineer to undertake this survey which is now being carried out by Mr. J. Mackworth Wood.

SWIMMING BATHS.

The popularity of swimming has increased greatly during recent years, resulting in a marked demand for swimming facilities, both indoor and outdoor. Apart from its usefulness in life-saving, swimming is one of the best forms of exercise, and everything should be done to foster and encourage this recreational activity.

Local Authorities were empowered to provide open-air swimming baths in 1846, and covered swimming baths in 1878. Private enterprise has always been an active partner in providing swimming baths, and it is significant that prior to 1878 all covered swimming baths in this country were privately owned.

During the last few years, private enterprise has renewed its activities in the provision of open-air swimming pools, which were very popular during the warm weather of 1933. As a result of the controversy which arose in respect to the purity of the water, which is a matter of considerable importance, the Ministry of Health found it necessary during the year to refer publicly to their Memorandum entitled "The Purification of the Water of Swimming Baths" dated August, 1929. It will be seen from that Memorandum that the transmission of infection by polluted water can, and does, occur, and that pathogenic bacteria can live in dirty water for considerable periods. There is no evidence, however, to support the alarmists' rumours indicating that disease in epidemic form has its origin in swimming baths in this country. It is desirable that the water of swimming pools should be free from pathogenic germs and that its bacteriological count should approximate to that of drinking water. The standard of purity can best be maintained by the system of combination purification—a combination, that is, of efficient continuous filtration with continuous and accurately controlled chlorination and aeration.

In regard to swimming baths provided by Local Authorities, the Ministry of Health requires an assurance that regulations are being applied. The question is often asked, however, whether a local authority could intervene if the water in swimming baths or pools provided by private enterprise became seriously polluted. The Ministry

stated that "there were powers under the Public Health Act, 1875 (Section 91) to deal with such cases as being a nuisance injurious to health, and under Section 102 for the right of entry by the local authority or any of their officers for the purpose of examination as to the existence of any nuisance.

"The position, then, was that the medical officer, or the sanitary inspector working under him, had a right of entry to the premises, and, in the event of any pollution, should instruct the owners as to the steps they should take.

"If the owners did refuse to take the necessary steps, they could be served by the Council with a notice requiring abatement of the nuisance, followed by legal proceedings."

Early in 1932, the Essex Education Committee considered the facilities for swimming instruction which are afforded to school children, and decided that their approval of such facilities would in future be subject to the School Medical Officer being satisfied from the health standpoint as to the suitability of the baths, and in regard to cleaning. In consequence, an inspection was made of each swimming bath, and swimming pool which it was proposed to use for swimming instruction for school children. Approval was not given in connection with two swimming pools.

MENTAL TREATMENT ACT, 1930.

The Out-patient Clinic at Oldchurch Hospital, Romford, held by Dr. W. G. Masfield, Medical Superintendent of Brentwood Mental Hospital, has continued, 117 patients attending, making in all 207 attendances. 67 of these patients were inmates of Oldchurch Hospital.

Dr. Masfield reports that it has been a satisfactory year's work and that the facilities have been appreciated by patients and relatives. He comments on the advantages gained by having the services of a Social Worker, whose services are now available in connection with this Clinic.

Similarly the Out-patient Clinic held at the Essex County Hospital, Colchester, by Dr. R. C. Turnbull, Medical Superintendent of the Severalls Mental Hospital, has continued and rendered helpful assistance to private practitioners and patients.

Towards the end of 1933 it was found that many medical practitioners in the County did not appear to make full use of the Mental Treatment Act of 1930. With the co-operation of Drs. Masfield and Turnbull, an explanatory memorandum was prepared, dealing with the provisions of this Act and enclosing the types of forms to be used. This was circulated to all medical practitioners in the County in February, 1934.

Subsequently arrangements were made for meetings of the practitioners at Brentwood Mental Hospital and Severalls Mental Hospital, the former being addressed by Dr. Masfield and the latter by Dr. Turnbull. Dr. Turnbull also addressed the relieving officers at their Annual Meeting held at Chelmsford.

The County is greatly indebted to these gentlemen for their addresses and, as a result of these efforts, it is hoped that greater use will in the future be made of the facilities under the Mental Treatment Act for the admission of voluntary and temporary patients direct to mental hospitals, thereby avoiding the necessity of admission of many patients to Public Assistance Institutions on three-day orders.

MENTAL DEFICIENCY.

As in previous years, Dr. T. P. Puddicombe, Deputy County Medical Officer, has examined and reported on cases submitted for the County Committee for the Care of the Mentally Defective and for the Justices. By this arrangement 303 cases have been reviewed and were classified as follows :—

	Male.		Female.		Total.
Feeble-minded	72	..	84	..	156 (a)
Imbeciles	62	..	33	..	95 (b)
Idiots	16	..	22	..	38
Not certified under the Act ..	9	..	5	..	14 (c)
	159	..	144	..	303

(a) Includes 10 males and 3 females referred for examination by the Justices.

(b) „ 2 males referred for examination by the Justices.

(c) „ 4 males referred for examination by the Justices.

The Essex Voluntary Association has again rendered invaluable service in making preliminary enquiries and assisting in the ascertainment and after-care of defectives. The Association is given a substantial grant by the Statutory Committee and is responsible for the organisation and control of Occupation Centres.

Pressure on residential accommodation has not been relieved during the year and consequently the waiting list has shown little decrease. Under these circumstances, when a vacancy occurs it is always a question of selecting the case which appears most urgent. This position should be overcome in the latter half of 1934, when it is hoped the extensions at the Royal Eastern Counties Institution will be available for occupation. When these are in use the defectives unsuitable for retention in their homes should have the first call on the beds, and after this relief ought to be given to the various Public Assistance Institutions by transfer in the first instance of those patients who are quite unsuitable for such Institutions, together with those who are considered to be in need of special training. There would appear to be no need to remove a person from a Public Assistance Institution to a special Institution for the mentally defective purely because that person is a certified mental defective. Quite a number of these patients can and do render useful service and are suitably employed and happy in their work at the Public Assistance Institutions.

At the end of 1933 the position in regard to the cases under the care of the Statutory Committee was as follows :—

	Male.		Female.		Total.
In Institutions	296	..	242	..	538
Under Statutory Supervision ..	541	..	443	..	984
Under Guardianship ..	18	..	17	..	35
On licence from Institutions ..	40	..	42	..	82
	895	..	744	..	1639

Of these, 51 were placed in Institutions, 2 under Guardianship and 110 under Statutory Supervision during the year.

In December, 1933, the report of the Departmental Committee on Sterilization was presented by the Minister of Health to Parliament. This excellent and carefully considered report is now in print and will be of great interest to all who are concerned with the care and control of the mentally defective, and especially so to those who have followed the discussions and debates of the various Societies on this important subject of the sterilization of the unfit.

The Committee intimate that they expect criticisms of their proposals, but state that they were in complete harmony in their formulated recommendations.

The Committee were impressed :—

- (1) With the fact that there are estimated to be over a quarter of a million mental defectives and a far larger number of mentally subnormal persons in the community entailing much social inefficiency and individual misery.
- (2) By the injustice of refusing to certain individuals, who believe they may transmit mental defect or disorder and who are in every way unfitted for parenthood, the legal right to have themselves sterilized.

More accurate ascertainment of the number of defectives is urged.

The proposals of the Committee are that subject to certain safeguards voluntary sterilization should be legalised in the case of :—

- (a) A person who is mentally defective or who has suffered from mental disorder.
- (b) A person who suffers from, or is believed to be a carrier of, a grave physical disability which has been shown to be transmissible.
- (c) A person who is believed to be likely to transmit mental disorder or defect.

It will thus be seen that the Committee are also in favour of voluntary sterilization for those who have grave physical defects which are known to be transmitted.

These recommendations of the Committee will be welcomed by those who have for a long time considered that facilities should be permissible and available for the sterilization of defectives and thus prevent procreation by selected cases of the unfit.

It remains to be seen what measures will be included in the Bill and what support it will receive when it comes before Parliament.

BLIND PERSONS ACT, 1920.

The Essex County Association for the Blind continued to carry out work under this Act by arrangement with the Education Committee.

At the end of the year there were 1,432 blind persons on the Register, an increase of 77. Of these, 105 were under 16 years of age and the remaining 1,327 adults were classified as follows :—Undergoing training 30, employed 222, trained but unemployed 2, training under consideration 17, unemployable 1,056 (an increase of 81).

The Association also has under observation a further 471 persons suffering from defective vision, &c., but not definitely classed as blind.

ESSEX COUNTY COUNCIL ACT, 1933.

Massage and Special Treatment. (Sections 54-71).

This Part of the Essex County Council Act, 1933, came into force on 1st April, 1934, by resolution of the County Council, in the Boroughs of Chelmsford, Colchester, Maldon and Saffron Walden, the Urban Districts of Brentwood, Chigwell, Chingford, Clacton, Dagenham, Epping, Grays, Hornchurch, Purfleet, Romford, Tilbury and Waltham Holy Cross, and the Rural Districts of Epping, Ongar and Orsett. It will also come into force on 1st August, 1934, in the Urban Districts of Billericay, Frinton and Walton, and Wanstead and Woodford. (By Section 69, the powers and duties under this Part of the Act are delegated to the Boroughs of Barking, Ilford, Leyton and Walthamstow, who can, by resolution, declare when this Part of the Act shall come into force in their districts).

Section 56 states that no person shall carry on an establishment for massage or special treatment (see definition in Section 51) in any of the before-mentioned districts without a licence from the County Council. Applications must be made on a prescribed form (see Section 57).

Under Section 58, licences valid for a period of one year will be issued by the County Council, except in the Boroughs of Barking, Ilford, Leyton and Walthamstow, with whom a working arrangement has been agreed upon, in order to secure model bye-laws and a common policy. The County Council may refuse to grant or renew or may revoke a licence on certain grounds. An aggrieved person may appeal to a court of summary jurisdiction, and if still aggrieved, may appeal to the quarter sessions.

Under Section 60, the County Council has made bye-laws. Penalties for offences are enumerated in Section 62, and premises excepted from the Act are set out in Section 67. Section 68 enables the County Council and the Boroughs of Barking, Ilford, Leyton and Walthamstow, subject to the approval of the Secretary of State, to deal with any premises which are advertised as being used for some legitimate purpose, but are in fact being used for immoral purposes.

The interests of Local Authorities are safeguarded as follows :—

SECTION 58 (1). The County Council must give notice to the appropriate Sanitary Authority of any application received, and state the date when the application will be considered ; they must also have regard to any representations which the Local Authority may make.

SECTION 59. The County Council must give notice to the appropriate Local Authority of the granting, renewing or revoking of, or refusing to grant a licence, and must also give notice of all appeals, and of the decisions in such appeals.

SECTION 60 (3). The County Council must send a copy of the Bye-laws made under this Section to each Local Authority.

SECTION 61. Officers duly authorised by a Local Authority have right of entry to licensed establishments to inspect the premises and books, cards or forms.

SECTION 64. Local Authorities or the County Council may take proceedings for the recovery of any penalty.

SECTION 65. Each Local Authority shall, during the first week of October in each year, send to the County Council a report on the conduct and management of the licensed establishments in their areas, and such report may contain recommendations regarding the renewal or otherwise. If a Local Authority shall detect a non-compliance with any of the proscribed conditions, or shall secure a conviction for any offence, they must report to the County Council with such recommendation as to revocation of licence or otherwise as they may deem expedient.

SECTION 70. If any Local Authority obtains powers in a Private Act to deal with massage or special treatment establishments, then the powers under the Essex County Council Act, 1933, shall cease to have effect.

Hairdressers' and Barbers' Premises. (Sections 87-88).

Under Section 87 of the Essex County Council Act, 1933, a Local Authority may make bye-laws for the purpose of securing the cleanliness of any premises in any County District used for the purpose of carrying on the business of hairdresser or barber, and of the instruments, towels and materials used in such premises. Such bye-laws must be exhibited in a suitable place on the premises. Power of entry for duly authorised officers of the Local Authority is given in Section 88.

A set of bye-laws, in draft, which are intended for the guidance of Local Authorities, is under consideration.

Movable Dwellings and Camping Grounds. (Sections 105-117).

This Part of the Essex County Council Act, 1933, came into force on 1st April, 1934, in the Administrative County, excepting Epping Forest. The rights or privileges in respect to a lawful fair or market are not interfered with. Sections 107-109 do not apply to the Urban Districts of Dagenham and Romford, who have similar powers under Private Acts.

The powers conferred upon Local Authorities fall under two headings, namely, movable dwellings and camping grounds, and may be taken as being additional to the existing powers to make bye-laws under the Housing of the Working Classes Act, 1885, and the Public Health Act, 1925, in respect to tents, vans, sheds and similar structures.

(i) MOVABLE DWELLINGS. SECTIONS 105-109. Section 105 states that "movable dwelling" means (a) any tent; (b) any structure capable of being moved from place to place, and (c) any van, cart, carriage, truck, tramcar, motor car, caravan, trailer or other vehicle used or intended to be used for the purpose of human habitation (whether temporarily or otherwise), but does not include any tent, structure or vehicle used temporarily for agricultural purposes, building operations by the County Council and by a Local Authority, or any canal boat, boat, craft, barge or similar vessel.

Section 107 empowers Local Authorities to deal with movable dwellings where (a) the amenities of any part of their district are prejudicially affected by the presence

of or conditions arising from any movable dwelling or movable dwellings in their district ; or (b) annoyance is caused to the residents in or visitors to any part of their district by reason of the noisy indecent or other offensive conduct of the occupiers of or persons frequenting any movable dwelling or movable dwellings in their district. Penalties are fixed by Sub-section (4).

Under Sub-section (1), the Court may, by Order (a) require removal by occupiers within a prescribed period of movable dwellings to which complaint relates ; and (b) specify an area where they will prohibit or limit the number of, or define class of movable dwellings to be allowed at any one time thereon. This specified area, however, according to the last paragraph of Sub-section (1) shall not extend beyond a distance of 200 yards from the movable dwellings to which the complaint relates. There is right of appeal to quarter sessions.

Section 108 is more a matter for the Surveyors, as it deals with questions affecting building lines in streets.

Section 109 gives additional powers to Urban Districts with a population of 20,000 or more, including the Urban District of Brentwood, such districts having the right, subject to the restriction in sub-section (1), to prohibit movable dwellings being placed in their district without their previous approval. An aggrieved person may appeal to a court of summary jurisdiction.

(ii) **CAMPING GROUNDS.** Sections 107, 109 and 111 do not apply to military or naval camps, movable dwellings or camps provided by a duly constituted religious or charitable society, an incorporated association, a roundabout proprietor, travelling showman or stallholder.

Section 105 states that "camping ground" means any area of land on which movable dwellings are situated or which is provided for the placing of movable dwellings.

Section 110 empowers a Local Authority to provide camping grounds, subject to the approval of the Ministry of Health, who will have regard to the general interests of the public and neighbourhood, ability of occupiers to comply with regulations, distance from nearest camping grounds, area, situation, water supply, sanitation, &c. If objections are raised, the Ministry of Health may direct a public inquiry, when the Local Authority shall give at least fourteen days' notice of the intention to hold such an inquiry by advertisement.

Section 111 authorises the Local Authority to make bye-laws for securing proper control, management, cleanliness, good and orderly conduct, preventing annoyance and safeguarding the amenities of their district, in relation to the use of camping grounds whether provided by themselves or not. A set of bye-laws in draft which are intended for the guidance of Local Authorities is under consideration.

Section 112 enables Local Authorities to close the whole or any portion of any camping ground provided by them if, in their opinion, the camping ground or such portion thereof is in a condition likely to endanger the health, is a nuisance or constitutes an annoyance or prejudicially affects the amenities of the locality.

Means of Access to Buildings. (S.129).

It is common knowledge that in many parts of Essex there are miles of unmade roads, some of which are impassable in winter, when sledges have to be used to get supplies to dwelling-houses. Under Section 129 of the Essex County Council Act, 1933, power is conferred upon Local Authorities which will enable them to prevent this unsatisfactory sporadic development. On the depositing of plans of any new building intended or adapted for use as a dwelling-house, the Local Authority may by notice in writing, require the provision before the building is erected, sold, let or occupied (as the Local Authority shall specify) of sufficient means of communication between the building and a made-up street or highway.

If it appears that the means of communication shall be in the form of a street the Local Authority may require a new street to be laid out, and may require the provision of any constructional work not exceeding that required for a new street by the bye-laws in force.

The County Surveyor has assisted, and is prepared to assist, so far as he is able, any Local Authority in enforcing this Section, and will on application furnish a specification which in his opinion should be regarded as the minimum "sufficient means of communication."

Prohibition on use of Unsuitable Land for Erection of Dwelling-houses. (S.132).

Under Section 132 of the Essex County Council Act, 1933, any Local Authority may by order prohibit or restrict (a) the erection of buildings intended or adapted for use as dwelling-houses on any land within their district which is liable to flooding; or (b) the erection of dwelling-houses on land which would by reason of the nature of the subsoil involve danger or injury to health.

Refuse Dumps. (S.146—157).

The object of the powers obtained under Sections 146—157 of the Essex County Council Act, 1933, (in conjunction with the Third Schedule) is to control the dumping of refuse in any place within the County other than the place within the County in which the refuse is collected or assembled; in other words, it is mainly to control the dumping of refuse which has been collected in London. In the first instance, the County Council sought powers to prohibit the dumping of refuse in this County without the permission of the Local Authority and the County Council, but the opposition was so great that amendments had to be made, and briefly the powers obtained are:—

SECTION 146 (1). On giving fourteen days' notice to the County Council, refuse can be dumped in any part of Essex (except Epping Forest), in accordance with Part I of the Third Schedule, *i.e.*, by properly controlled dumping on the lines of the precautionary measures issued by the Ministry of Health in 1922 with certain amendments, notably, that refuse must not be left uncovered for more than 24 hours from the time of deposit.

SECTION 146 (2). With the previous consent in writing of the County Council and of the Local Authority, refuse may be dumped in accordance with Part II of the Third Schedule. This is modified controlled dumping, and is intended to deal with dumping on a large scale.

SECTION 146 (3). The County Council, with the approval of the Local Authority, may prescribe areas in the County where dumping on a large scale may take place in accordance with Part II. of the Third Schedule.

Ice Cream. (S.158—159).

Section 158 of the Essex County Council Act, 1933, can be brought into force in any County district at the expiration of three months after the passing of a resolution by a local authority adopting this Section—see sub-section (10). Due notice must be given in the press.

Any manufacturer or vendor or merchant or dealer in ice-cream or similar commodity, and any premises, excluding clubs, hotels, theatres, music halls and cinemas, must be registered with the local authority, but such registration of the person is necessary in one County district only. Sub-section (4) gives power to a local authority to refuse or revoke registration if the premises are “unsuitable.” There is right of appeal by appearing before the Local Authority, and right of further appeal to a court of summary jurisdiction. In the Act, there is no definition of the word “unsuitable.” It would be difficult to lay down a common policy for the whole of the Administrative County, and therefore each case should be dealt with on its own merits. Help can be obtained from the conditions given in Section 72 of the Public Health Act, 1925, the Milk and Dairies Order, 1926, the Public Health (Meat) Regulations, 1924, and the Regulations relating to bakehouses.

A model register and model forms have been set up in type by the County printer, Mr. John Dutton, Chelmsford, and can be obtained direct from him on application.

Section 159 operated from 1st December, 1933, and aims at preventing the spread of infectious disease. Notice of all cases of infectious diseases occurring among the staff and their families must be given to the local Medical Officer of Health. The Medical Officer of Health and Sanitary Inspector may visit the premises where the infectious disease has occurred, and seize and destroy all ice cream, &c., found thereon, and the Local Authority must compensate. The names and addresses of all vendors and dealers to be legibly printed or inscribed on carts and receptacles.

Knackers' Yards. (Section 186).

Section 186 of the Essex County Council Act, 1933, gives Local Authorities power to make bye-laws requiring persons licensed to use any place as a knacker's yard to keep such registers and records as may be prescribed, and to produce them on application to a duly authorised officer. A set of bye-laws in draft, which are intended for the guidance of Local Authorities, has been circulated, and is brought forward for consideration.

A query has already been raised as to whether the word "licensed" referred to in Section 186 (1) includes registered knackers' yards, *i.e.*, those knackers' yards in existence at the passing of the Public Health Act, 1875. The Clerk of the County Council has stated that the Section appears only to cover licensed slaughter houses and not registered slaughter houses if the latter are not licensed.

Means of Escape from Buildings in Case of Fire. (Section 136).

Under Section 136 of the Essex County Council Act, 1933, every Local Authority has power in certain cases to insist upon the provision of means of escape in case of fire in connection with an orphanage, or a home into which children are received, or a nursing home or hospital. This power relates to every building which exceeds two storeys in height, and in which the upper surface of the floor of any upper storey is above 20ft. either from the street level or from the ground level.

This matter will be dealt with as a rule by the Surveyor, but it is thought desirable to draw attention to it.

County Laboratory Service. (Section 185).

Under Section 185 of the Essex County Council Act, 1933, the County Council has legalised the position in respect to the provisions of the County Laboratory Service. They also took power to set up a County Laboratory. There is no immediate intention of interfering with the present service, which is carried out by Dr. Beale under his appointment as part-time Bacteriologist for Essex.

PROPAGANDA.

(1) **TRAVELLING HEALTH EXHIBITION.** The County Council assisted in providing Health Exhibitions in the following districts:—Buckhurst Hill, Colechester, Fordham, Greenstead Green, Great Easton, Laindon, Layer-de-la-Haye, Roehford, South Woodham, Stansted, Stanway, Thundersley, Tiptree, Warley and West Mersea.

(2) **HEALTH LECTURES.** Members of the staff of the County Public Health Department gave 25 lectures during the year to Women's Institutes, Women's Guilds, Midwives Associations, Nursing Associations, &c.

PART II.

TUBERCULOSIS.

The following remarks, reports and tables only deal with the principal features of the County Scheme for the treatment of tuberculosis but should be sufficient to give a general outline of the scope and type of work undertaken during 1933 :—

Notifications.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1930.

(a) A summary of the notifications made in the Administrative County of Essex during the period 1st January, 1933, to 31st December, 1933, is given below :—

TABLE XI.

	FORMAL NOTIFICATIONS.												Total Notifica- tions.
	Primary Notifications of New Cases of Tuberculosis.												
	Age Periods.											Total (all ages)	
	0—	1—	5—	10—	15—	20—	25—	35—	45—	55—	65		
Pulmonary, Males	—	3	13	10	55	75	195	177	116	53	9	706	809
„ Females	—	2	10	24	57	109	168	87	63	28	8	556	647
Non-Pulmonary, Males	5	32	66	58	18	18	14	20	10	3	2	246	262
„ Females	5	20	30	41	28	28	27	15	5	7	1	207	224

(b) The following summary shows the new cases which came to the knowledge of the Medical Officers of Health during the above-mentioned period, otherwise than by formal notification :—

	Age periods.											Total.
	0—	1—	5—	10—	15—	20—	25—	35—	45—	55—	65—	
Pulmonary, Males	2	2	3	5	11	9	26	20	15	5	5	103
„ Females	2	1	2	1	7	19	34	13	9	2	1	91
Non-pulmonary, Males	4	11	3	4	3	7	4	—	—	—	1	37
„ Females	3	6	6	2	2	5	1	1	—	—	—	26

The sources from which information as to the above-mentioned cases was obtained are shewn overleaf.

Source of Information.	No. of Cases.	
	Pulmonary.	Non-Pulmonary.
Death Returns { from Local Registrars	22	11
transferable deaths from Registrar-General	14	9
Posthumous Notifications	14	3
"Transfers" from other areas (other than transferable deaths)	134	39
Other Sources (Forms I and II)	10	1

TABLE XII.

	Pulmonary.			Non pulmonary.			Total Cases.
	Males	Females	Total	Males	Females	Total	
Number of cases of Tuberculosis remaining at the 31st December, 1933, on the Registers of Notifications kept by District Medical Officers of Health in the County.	4246	3718	7964	1759	1666	325	11,389
Number of cases removed from the Registers during the year by reason <i>inter alia</i> of:—							
1. Withdrawal of notification... ..	25	27	52	9	10	19	71
2. Recovery from the disease	90	77	167	74	60	134	301
3. Death	374	294	668	46	41	87	755

TABLE XIII.

SHOWING ATTACK AND DEATH-RATES FROM TUBERCULOSIS IN THE
ADMINISTRATIVE COUNTY OF ESSEX.

YEAR.	Pulmonary Tuberculosis.				Non-Pulmonary Tuberculosis.				Tuberculosis (All Forms).			
	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.	Noti- fica- tions.	Rate per 1,000 Pop.	Deaths.	Rate per 1,000 Pop.
1912-16	Not		851	0.86	Not		269	0.27	Not		1120	1.13
1917-21	avail	able	752	0.89	avail	able	199	0.24	avail	able	951	1.13
1922-26	1110	1.16	656	0.69	320	0.34	148	0.15	1430	1.50	804	0.84
1927-31	1110	1.00	710	0.64	382	0.34	141	0.13	1492	1.34	851	0.77
1932	1188	0.96	683	0.55	425	0.34	165	0.13	1613	1.30	848	0.68
1933	1262	0.99	680	0.53	453	0.35	135	0.11	1715	1.34	815	0.64

TABLE XIV.

SHOWING DEATHS FROM TUBERCULOSIS REGISTERED WITH LOCAL REGISTRARS OF BIRTHS AND DEATHS IN THE ADMINISTRATIVE COUNTY DURING 1933, AND PARTICULARS REGARDING NOTIFICATION UNDER THE PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS (*Transferable Deaths are excluded*).

DISTRICTS.	No. of Deaths.	When Notified.							No Information.
		After Death	Within 3 months of death.	Within 3-6 months of death.	Within 6-12 months of death.	Within 1-2 years of death.	Within 2-4 years of death.	More than 4 years before death.	
Urban.									
Barking ...	34	3	7	1	4	7	6	2	4
Benfleet ...	6	...	1	...	1	1	...	...	3
Braintree ...	7	...	3	...	3	1	...	...	...
Brentwood ...	3	1	...	1	...	...	...	...	1
Brightlingsea ...	3	...	2	...	...	...	...	...	1
Buckhurst Hill ...	3	...	...	2	...	...	...	...	1
Burnham-on-Crouch ...	3	...	...	...	1	...	1	1	...
Canvey Island ...	2	...	2	...	...	...	...	...	...
Chelmsford B. ...	7	1	...	...	1	1	3	1	...
Chingford ...	11	...	2	2	2	1	2	1	1
Clacton-on-Sea ...	10	1	1	1	2	2	2	1	...
Colchester B. ...	29	2	7	3	4	3	1	4	5
Dagenham ...	48	3	10	5	9	5	7	1	10
Epping ...	1	...	...	...	...	...	...	...	1
Frinton-on-Sea ...	1	...	...	1	...	...	...	...	...
Grays ...	10	...	1	1	1	...	1	3	3
Halstead ...	5	...	...	2	1	...	1	1	...
Harwich B. ...	12	1	1	...	3	1	...	2	4
Hornchurch ...	20	...	7	3	1	1	2	1	5
Ilford B. ...	63	2	15	1	10	13	7	7	8
Leyton B. ...	68	2	17	4	8	13	6	7	11
Loughton ...	2	1	...	...	...	1	...	...	...
Maldon B. ...	5	...	1	1	1	1	...	...	1
Purfleet ...	2	...	2	...	3	1	...	1	2
Rayleigh ...	6	...	1	1	1	1	...	...	2
Romford ...	28	...	7	1	4	6	4	1	5
Saffron Walden B. ...	...	...	...	...	...	...	...	...	...
Shoeburyness ...	4	...	1	...	1	1	1	...	...
Tilbury ...	13	2	2	2	1	3	...	1	2
Waltham Holy Cross ...	2	...	1	...	...	1	...	...	...
Walthamstow B. ...	82	7	13	8	4	13	8	17	12
Walton-on-the-Naze ...	...	...	...	...	...	...	...	...	...
Wanstead ...	6	...	1	...	1	2	...	1	1
West Mersea ...	1	...	...	...	...	...	1	...	...
Witham ...	3	...	...	...	...	1	1	...	1
Wivenhoe ...	2	...	...	...	1	...	...	...	1
Woodford ...	12	1	5	...	1	3	2	...	...
Totals ...	521	27	110	38	69	83	56	53	85
Rural.									
Belchamp ...	...	...	...	...	...	...	...	...	...
Billericay ...	28	...	9	1	3	1	5	5	4
Braintree ...	6	1	...	...	...	1	1	2	1
Bumpstead ...	1	...	...	...	...	...	1	...	...
Chelmsford ...	16	...	4	2	...	1	3	1	5
Dunmow ...	5	1	...	...	...	...	...	2	2
Epping ...	3	...	1	...	...	...	1	...	1
Halstead ...	6	...	1	3	1	...	...	1	...
Lexden and Winstree ...	9	...	6	1	...	...	1	...	1
Maldon ...	8	...	1	...	2	1	...	1	3
Ongar ...	4	...	2	...	...	...	...	...	2
Orsett ...	12	1	5	1	1	1	1	...	2
Rochford ...	13	2	1	...	2	...	...	2	6
Romford ...	4	...	...	1	2	...	...	...	1
Saffron Walden ...	1	...	...	...	...	...	...	...	1
Stansted ...	2	...	...	...	1	1	...	...	...
Tendring ...	12	...	3	2	1	...	1	3	2
Totals ...	130	5	33	11	13	6	14	17	31
URBAN DISTRICTS ...	521	27	110	38	69	83	56	53	85
RURAL DISTRICTS ...	130	5	33	11	13	6	14	17	31
TOTALS ...	651	32	143	49	82	89	70	70	116

The notification by general practitioners of cases of tuberculosis still leaves much room for improvement. Were it not for the fact that in a large number of instances the case is notified by the Tuberculosis Officer there is no doubt that the figure shown in Table XIV would be even less favourable. Every effort is made to ensure that when there is no doubt that the diagnosis is one of tuberculosis, each new case seen by a Tuberculosis Officer is definitely notified. As a general rule, the Tuberculosis Officer requests the patient's private medical attendant to notify, but if he fails in this respect, then the Tuberculosis Officer himself notifies the case. If only general practitioners would not hesitate in referring all doubtful cases to the Tuberculosis Officer for the area, there is no doubt that the demand made by the general practitioners for urgent removal from home of a patient suffering from acute or advanced tuberculosis would not arise so frequently. With the improved facilities now available for arriving at an early and definite diagnosis, the fear of wrongly notifying a case under the Public Health (Tuberculosis) Regulations is largely removed.

New Cases and Mortality during 1933.

The following table is supplied at the request of the Ministry of Health :—

TABLE XV.

Age Periods.	New Cases.				Deaths.			
	Pulmonary.		Non-pulmonary.		Pulmonary.		Non-pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
0—	2	2	9	8	1	1	8	8
1—	5	3	43	26	1	1	16	19
5—	16	12	69	36	}	— 6	11	8
10—	15	25	62	43				
15—	66	64	21	30	}	62 75	11	12
20—	84	128	25	33				
25—	221	202	18	28	89	99	3	9
35—	197	100	20	16	89	61	3	3
45—	131	72	10	5	68	31	3	3
55—	58	30	3	7	48	18	2	5
65 and upwards ..	14	9	3	1	15	15	5	6
	809	647	283	233	373	307	62	73

Dispensaries.

Table XVIII on page 71 gives details of the work carried out at the dispensaries in the County during the year.

The number of patients whose names appeared on the dispensary registers at the end of 1933 was 4,889, this figure being slightly higher than the figure for 1932, namely, 4,824. The special efforts which have been made during the past few years to ensure that the dispensary registers only contain the names of patients actually known directly to the Tuberculosis Officer, or coming under the Tuberculosis Scheme through some other channel, are now reaching fruition, and the number of patients whose names were on the registers at the end of 1933 can be taken as the number of patients whose

names must be retained on the registers for various reasons, *e.g.*, for active treatment or supervision until the patients can be regarded as having "recovered" from the disease.

No additional tuberculosis dispensaries were opened during the year. The dispensaries continue to serve as Consultative and Diagnostic Centres. Special Clinics at which cases presenting special diagnostic and other difficulties are held by Dr. W. Burton Wood, the County Consulting Physician for Pulmonary Tuberculosis, as follows :—

Where held.	Sessions.	No. of Patients seen during 1933.
Victoria Park Hospital ..	1st and 3rd Wednesday afternoons each month	375
Black Notley Sanatorium	2nd and 4th Wednesday afternoons each month	292

These clinics have been much appreciated by the District Tuberculosis Officers and there is no doubt that it has thus been possible to deal satisfactorily with many cases which would otherwise have been recommended for admission to a hospital or sanatorium.

The number of contacts examined during 1933 was not quite so high as 1932. Much difficulty is still experienced in persuading contacts to attend the dispensary for examination. The definition of a "contact" does not include persons who may give a history of casual previous contact with a known case of tuberculosis and who attend a dispensary on their own initiative, or are referred by a private medical attendant. A "contact" for the purpose of table XVIII is a person who is examined because he, or she has been living in contact with a known case of tuberculosis. It will therefore be readily appreciated that a large percentage of persons coming within this category who feel well, are indifferent to the desirability of being examined.

In connection with the examination of "contacts" efforts are now being made by Tuberculosis Officers to make intensive enquiries into the health of members of a family in which the death of a child from tuberculous meningitis has occurred, and in which there is no known case of tuberculosis. It is too early to supply figures of any value in connection with these arrangements. It is generally accepted that a child who dies from tuberculous meningitis must have been in close "contact" with a case of tuberculosis, and it is hoped that the result of the enquiries which will be made by the Tuberculosis Officer will discover the source of infection—the person concerned probably being quite unaware that he or she is suffering from tuberculosis.

Institutional Treatment.

Tables XIX and XX on pages 72, 73 and 74 give particulars of the extent of Institutional Treatment provided during the year. An average number of 550 beds are provided for in the estimates for 1933-34.

Priority of admission is given to patients who have the most favourable opportunities of definitely "recovering." Every effort is also made to secure as early

admission as possible for those patients in an advanced stage of the disease who cannot be nursed at home, and who are likely to be a source of infection in the home. Unfortunately accommodation for this type of case is not always easy to find. In addition to the continued use of the valuable beds for men at the Liverpool Road Hospital, London, the beds at Public Assistance Institutions are used to their fullest extent. The demand for beds for patients in the early and advanced stages of the disease limits very considerably the beds which can be given to patients in the intermediate stages. These patients require frequent short periods of rest under hygienic conditions to enable them to attain a moderate standard of health and to educate them in the mode of life they should follow, not only in their own interests, but also for the safety of those with whom they mix.

Every recommendation for institutional treatment is carefully examined before sanction for admission is given, and although this frequently means disappointment, it ensures that the best and most economical use is made of the accommodation available.

(1) COUNTY SANATORIA.

(a) BLACK NOTLEY SANATORIUM. There were 188 beds available at this institution during 1933 and the following report by Dr. M. C. Wilkinson, the Medical Officer at the sanatorium, supplies interesting information concerning the work now being undertaken :—

During 1933 the work of the Sanatorium proceeded satisfactorily, and further progress was made. Two hundred and eighty three patients were admitted (one hundred and thirty to the beds for pulmonary cases and one hundred and fifty three to the beds for non-pulmonary cases). One hundred and seventy nine patients were discharged with the disease quiescent, and in many of these cases a permanent cure is hoped for. The treatment remains based on the principle of rest in the open air, and of splintage of the diseased part. Whenever possible artificial pneumothorax is used to produce rest of the diseased lung; in the case of joints external splints are used. Additional forms of treatment used were surgical operations, sanoerysin treatment, tuberculin, and for non-pulmonary cases, natural and artificial light treatment.

The following table shows the details of artificial pneumothorax treatment in 1933 :—

Artificial Pneumothorax Inductions.

In-Patients	23
Out-Patients	0

Number of Pneumothorax Cases under Treatment.

In-Patients	70
Out-Patients	12

Number of Refills given.

In-Patients	995
Out-Patients	160

With reference to Sanocrysin, which Dr. Burton Wood prescribes, particularly for recent exudative lesions, fifteen courses of treatment were given.

Six cases of tuberculous laryngitis occurred during the year. Owing to frequent routine inspections of the larynx, these were, for the most part, diagnosed in the early stages of the disease, and all did well on rest treatment of the voice and inhalations.

The Blood Sedimentation Rate Test has been added to the routine investigations of pulmonary and non-pulmonary cases. Miss M. D. Williams, the Dispenser- Clerk, ably assisted Dr. W. A. M. Stewart in the performance of very many of these tests during the year.

Other laboratory work comprised :—

Sputum examinations	..	..	752
Examinations of urine	..	..	218
Examination of fæces	..	..	46
Various	..	..	42

Ninety-one cases of non-pulmonary tuberculosis were discharged during the year, the majority being cases of bone and joint tuberculosis. Under the guidance of Sir Henry Gauvain, these were treated with good results, chiefly by conservative measures. Operation is frequently required for the treatment of abscess or sinus, and for the treatment of genito-urinary tuberculosis or tuberculous glands of the neck, but only five operations on tuberculous joints were required during the year.

The surgical side of the work has benefitted considerably from the appointment of Mr. R. Reid, M.S., F.R.C.S., as consulting surgeon to the Sanatorium. Since his services have become available, the major operations required in the treatment of tuberculosis and also emergency operations have been carried out at the sanatorium, and excellent results have been obtained. This is of benefit to patients and staff; for the patient it means operation in familiar surroundings, without interruption of continuity of treatment; for the staff there is the advantage of working in an institution where all forms of treatment for tuberculosis can be carried out.

The following operations were performed in 1933 :—

Incision and curettage of abscesses	..	..	18
Curettage of sinuses	..	..	3
Phrenic evulsion	..	..	11
Excision of neck glands	..	..	8
Tonsillectomy	..	..	8
Operations on tuberculous joints	..	..	5
Rib re-section	..	..	2
Appendicectomy	..	..	2
Epidymectomy	..	..	1
Various	..	..	5

Owing to the appointment of Mr. Reid the scope of the work has been extended in the investigation and treatment of genito-urinary cases. Many of the results have been encouraging, and the completion of the facilities for treating this particularly grave form of tuberculosis has been one of the outstanding marks of progress during the year.

In the X-ray Department, two thousand five hundred and eighteen radiograms were taken, of which three hundred and sixty-four were for out-patients. In addition, frequent screen examinations of the chest were made. During the year a qualified radiographer was appointed to this Department.

In the Light Treatment Department it has been possible to give more patients treatment during the winter months, as the result of advice given by Dr. Arthur Burrows. An interesting side of the work in this department has been the treatment of a series of twenty lupus cases under Dr. Burrows. The majority of these cases have responded extremely well to treatment.

In the Plaster Room two hundred and fifty-four plaster splints were applied and twenty-seven celluloid splints made. There has been improvement in the making of the latter splints, and I am grateful to the Matron for her valuable assistance in this matter.

During the year eleven Nurses sat for the examination of the Association of Tuberculosis Institutions, of whom nine passed. A word of thanks should be expressed to the Matron and Nursing Staff for the high standard of nursing services provided at the Sanatorium. This excellent work is appreciated both by the patients and the medical staff.

Mr. Donaldson, one of the County Dental Surgeons, has visited the Sanatorium for three sessions a month to carry out dental treatment, which has proved of great value to the patients.

During the year no case of infectious fever has occurred at the Sanatorium.

By arrangement with the County Medical Officer, an Open Day for Tuberculosis Officers and general practitioners was held on October 7th. Alderman F. D. Smith and Councillor J. Parish kindly consented to be present. An address by Sir Henry Gauvain was given on the "Treatment of Joint Tuberculosis in an Open Air Hospital," and by Dr. Burton Wood on "Pulmonary Tuberculosis in Childhood." Following the addresses, demonstrations of the work were given by Sir Henry Gauvain, Dr. Burton Wood and Dr. Franklin Wood. Fifty-seven visiting doctors were present.

On September 6th, Dr. Quine and Dr. Good, of the Ministry of Health, visited the Sanatorium. They inspected every branch of the work, and expressed themselves very pleased with the facilities provided and the treatment carried out.

At the beginning of the winter session a third teacher for the sanatorium school was appointed. The work of the teachers has been marked by co-operation with the medical and nursing staffs, and has been of much value to the children and to the Sanatorium.

Two improvements have been made in the patients' recreation facilities. During the year a talking film machine was installed in the King Edward VII Memorial Hall, and a weekly talking film programme is now given. Also the patients' library has been re-organised, and many new books added. Arrangements have been made that the books supplied to each ward are changed at frequent intervals.

An addition was made to the Sanatorium grounds during the year by the purchase of the four-acre field behind the men's ward. This ground is being used as an additional vegetable garden.

Finally, my appreciation should be expressed to my colleagues, Dr. W. A. M. Stewart and Dr. F. G. Brown, for their valuable services to the Sanatorium during the past year.

(b) HAROLD COURT SANATORIUM. At this sanatorium the 70 beds available for male patients suffering from pulmonary tuberculosis in its early stages have proved quite inadequate for all the patients recommended for admission. A consistently high waiting list resulted, and delay in arranging admission was inevitable. The following information has been supplied by Dr. J. S. Harper, the Medical Officer at the sanatorium :—

Total No. of patients discharged during the year	..	177
Discharged home after a period of sanatorium treatment	81	
Discharged home after one month's educational treatment	35	
Died	4	
Transferred to :—		
London Fever Hospital, Liverpool	15	
City of London Hospital, Victoria Park ..	15	
Royal National Sanatorium, Bournemouth ..	11	
British Legion Village, Preston Hall	8	
Oldechurch Hospital, Romford	3	
Burrow Hill Colony	3	
Colchester Sanatorium	1	
Orsett Public Assistance Institution	1	
	—	177
Patients admitted during the year		179

The work of the sanatorium has been carried out on similar lines to the previous year, the most significant happening during the year being the decision to provide an X-ray apparatus. This is not yet completed, but next year patients will benefit from the facilities thus provided.

(N.B.—The X-ray installation came into use in April, 1934).

Observation Block. Four beds are maintained for observation cases. Owing to the X-ray facilities throughout the County, and to Dr. Burton Wood's Special Clinics, the necessity of admission of cases for observation is diminishing, and these observation beds have, for the greater part of the year, been occupied by sputum negative cases of pulmonary tuberculosis.

Treatment. This has been carried out on the same lines as previously. Suitable cases are treated by artificial pneumo-thorax, or extended rest. Cases which will not benefit from prolonged sanatorium treatment are given a short educational course.

During the year, 53 patients received 775 artificial pneumo-thorax re-fills. Of these 53 cases, 15 were carried over from the previous year, 28 cases were induced at Harold Court and 10 had artificial pneumo-thorax before admission.

Aurotherapy. Eighteen patients received Sanoerysin treatment and were given a total of 167 intravenous injections.

305 X-rays have been taken during the year, 304 at Oldechurch Hospital, Romford, and 1 at the City of London Hospital, Victoria Park.

(c) **HIGH BEECH SANATORIUM.** This sanatorium provides very valuable beds for 32 children (glandular and convalescent cases of non-pulmonary tuberculosis).

Children suffering from enlarged glands benefit considerably as the result of the open-air life with good food and adequate rest, and as a result surgical interference is often rendered unnecessary. Dr. L. S. Fry has supplied the following interesting report on the work done at the sanatorium during 1933 :—

During the year, 76 cases were admitted, classified as follows :—

Tuberculosis of Cervical Glands	..	..	45
Tuberculosis of Bones and Joints	..	..	14
Tuberculosis of Abdominal Glands	..	..	9
Observation Cases	..	..	8

As in previous years the intra-dermal Tuberculin test was used extensively and found to be of great assistance in arriving at a diagnosis in doubtful cases. A series of negative Tuberculin tests in a child with enlarged glands is, in the writer's opinion, strong if not conclusive evidence, that the condition is not tuberculous and indicates that some other cause for the enlargement must be sought for. Thus in a child with enlargement of the posterior cervical group of glands a negative Mantoux test suggested a diagnosis of Hodgkin's disease, which was subsequently confirmed by removal of a gland for histological examination.

Number of cases Tuberculin tested, 26. Of these, 13 proved positive and 13 negative.

Schick Test. Nearly all new admissions were Schick tested and positive reactors immunised with three or more injections of T.A.M. or T.A.F. A final Schick test was carried out whenever possible 8 weeks after the third injection. It was found that 81 per cent. of cases required 3 injections, 14 per cent. 4 injections, and 5 per cent. 5 injections, to render them Schick negative.

Summary of tests :—

Total number of Schick tests	..	..	69
Positive and immunised	..	..	48
Negative	..	..	19

Five cases were immunised without a primary Schick test. No case of Diphtheria occurred during the year.

Infectious Disease. In January and February there was an outbreak of Chickenpox, following a rather severe case of Herpes Zoster in a child who had been in hospital several months. Nearly every child in the wards who had not previously had the disease eventually became infected. This epidemic greatly interfered with admissions during the first three months of the year, and accounts in part for the total admissions being only 76, as compared with 123 in 1932.

Measles. In May a case of Measles occurred in the Babies' Ward. Through the courtesy of Dr. Nabarro, of Great Ormond Street Children's Hospital, a supply of Measles convalescent serum was obtained and all children under 7 years of age in the ward (6 cases) who were not known to have previously had the disease, were given an appropriate dose before the sixth day from exposure. The serum apparently afforded complete protection to these contacts, as no further cases occurred in the ward.

(2) INSTITUTIONS UNDER AGREEMENT.

The beds in the specially provided pavilions at the Ilford (20 beds), Colchester (18 beds), and Chingford (20 beds) Isolation Hospitals, continue to be used for intermediate and moderately advanced female cases of pulmonary tuberculosis. There is always a waiting list of patients for these 3 institutions.

(3) INSTITUTIONS NOT UNDER AGREEMENT.

It is still found necessary to take a considerable number of beds at various institutions, other than those belonging to the County Council. During 1933 an average number of 202 outside beds was kept occupied. A large number of patients find their way to the various London Hospitals, and the County Council frequently assume financial responsibility for their treatment in these Hospitals, after being satisfied with the circumstances connected with their admission. Special mention must be made of the excellent accommodation at the Liverpool Road Hospital, where an average number of 48 beds is kept continually occupied by male patients suffering from advanced pulmonary tuberculosis, and the following is a report by Dr. R. Massingham, the Resident Medical Officer :—

The arrangement which your Council has had with the Liverpool Road Hospital has now been in existence since May, 1927. I think, from every point of view, this arrangement has been an altogether successful one, and has, with very few minor exceptions, worked smoothly and easily.

The patients have I think gained very real benefit from their stay here, and the majority of them have usually accepted our advice of continued treatment when they have completed their initial three months. When one considers the difficulties of treating men with chronic pulmonary tuberculosis who have little chance of ultimate recovery, it can be readily appreciated that they are well satisfied with the treatment. Some of the E.C.C. patients have been here with us for as long as five years, a fact which speaks well for the harmony which exists between them and the Hospital.

If one excepts the unavoidably high mortality among some of the types treated, others have benefitted to such an extent that they have improved enough either to return to a moderately useful life, or to be transferred for Sanatorium treatment. Thus the double purpose of segregation and treatment of these cases of tuberculosis has been harmoniously carried out.

I have been astonished how easy the administration of these admittedly difficult cases has been. During the many years we have had patients from the E.C.C. there has rarely been a case in which disciplinary action has had to be taken. I think this speaks very highly for the patients themselves, and the life they have to lead here. By interesting them in the various bedside industries, and making their lives as little institutional as possible, they have, on the whole, remained remarkably contented.

During the year arrangements were made to take beds as required at the Merivale Sanatorium, Sandon, near Chelmsford, primarily for female patients who, after a stay in the Black Notley Sanatorium, are not found to be making sufficient progress which would justify their retention there. These patients are transferred direct to the Merivale Sanatorium to complete their period of institutional treatment, thus leaving available a valuable bed at Black Notley for a patient for whom some definite treatment, *e.g.*, artificial pneumothorax, is likely to prove beneficial.

Tuberculosis Care Associations.

Table XXI shows the work carried out by Care Associations during the year.

In view of the excellent work being performed by these Care Associations, the County Council approved of increased grants being made for "After Care" purposes in respect to the year ended 31st March, 1934. These grants were as follows:—

	£		£
Barking	60	Ilford	137
Chelmsford	55	Leyton	127
Dagenham	120	Romford	89
Grays	64	Saffron Walden	25
Halstead	15	Walthamstow	135

In addition to these grants, the County Council make a grant of not exceeding £20 per annum to each Care Association for expenditure in connection with printing, stationery, &c.

Shelters.

During the year an average number of 84 shelters was in use by patients at their homes.

Travelling Facilities for Patients.

An amount of £41 19s. 2d. was expended during the year in providing necessitous patients with free travelling vouchers upon admission or discharge from Institutions, and special visits to "Out-patient" Departments.

Extra Nourishment.

During the year 110 patients were granted extra nourishment at a cost of £171 16s.

Public Health (Prevention of Tuberculosis) Regulations, 1925.

Public Health Act, 1925 (Section 62).

No action was taken during the year by the County Council under the above Regulations and Act.

At my request the following article has been contributed to the Report by Dr. W. Burton Wood, the Consulting Physician for Pulmonary Tuberculosis to the Essex County Council :—

Pulmonary Tuberculosis and Chronic Pulmonary Catarrh in Children of School Age.

When the poet referred to the simple child as a creature that lightly draws its breath he evidently had in mind the summer evenings he so beautifully describes—evenings when it is so “light and fair” that an infant, if so disposed, can betake itself to a churchyard and seated upon a convenient grave enjoy its supper surrounded by the emblems of man’s mortality. For the child who continues to respire gently during the autumn, winter and spring seasons of this unhappy climate is something of a phenomenon. Coughing is almost universal among the child population of these islands during some part of the winter months, and a child who escapes with nothing worse than a short period of discomfort by day and disturbed sleep by night is fortunate.

THE WEAK-CHESTED CHILD. In general, we may say that the child who suffers from a “weak chest” belongs to one of two groups :— (a) The Tuberculous and (b) The Catarrhal. The members of the latter group outnumber those of the former many times over, and their disabilities are in the main more distressing. Yet they receive but scant attention in schemes to promote child welfare. The reformer who strains at the tuberculous gnat swallows the catarrhal camel without demur.

In the early days of the Tuberculosis Dispensary, the two groups were confused. A child was pale, poorly nourished, debilitated and subject to cough. It was natural to suppose that tuberculosis was responsible, especially if the child came from a tuberculous home. As time passed, however, it was noticed that very few of these so-called “tuberculous” or “pre-tuberculous” children developed any signs of tuberculous disease, yet one could hardly suppose that a few weeks occupation of a hut at an institution like Sible Hedingham, even with the use of a sandpit and gratuitous donkey rides, could suffice to bestow on a tuberculous-tainted child lasting immunity from a virulent disease. Developments in radiology were soon to prove that we had been affixing tuberculous labels to the wrong children. The Sible Hedingham group was mainly composed of delicate, not of tuberculous children.

Ten years ago at Sible Hedingham, 30 beds were provided for the treatment of pulmonary tuberculosis in childhood, and the waiting list often attained a similar number of candidates for admission. To-day at Black Notley, 25 beds are reserved for pulmonary tuberculosis in childhood, not more than half of which are occupied by the victims of pulmonary tuberculosis and there is no waiting list. This remarkable statistical improvement cannot be claimed to represent a triumph for preventive medicine. The change is due to improved methods of diagnosis. More accurate methods have enabled us to sort out the tuberculous children from the vast numbers of delicate children who are still found in our schools and from which the C3 section of the future will be recruited. The lessened burden on the tuberculosis service should imply an increased burden elsewhere, for the discovery that respiratory disease in childhood is seldom due to the tubercle bacillus, has not reduced the incidence of respiratory disease. The problem of the weak-chested child is one which demands the sympathetic consideration of all who are interested in public health. The problem may be better understood if we compare the two groups of children so afflicted.

(1) *The Tuberculous Group.*

Chest radiology is a comparatively recent development in X-ray work, but the advance that has been made in this department during the last ten years has been remarkable. A few years ago a skiagram was regarded as a useful adjunct in the diagnosis of lung disease. To-day it is an essential part of every complete examination of the lungs. Before the advent of chest radiology, the clinician, in making his diagnosis, had to rely on the patient's story, the symptoms of which he complained, and the results of a physical examination of his chest, especially any alteration in the drum-like sound elicited when the chest wall was suitably struck by the fingers, and any abnormal sounds heard through a tube applied at various points on the chest wall. Assistance was also obtained from an examination of expectoration, its quantity, quality, and the nature of the organisms it contained. Like Polonius, the physician was compelled by indirections to find directions out. It is obvious that the means adopted were crude and only capable of ascertaining the presence or absence of gross disease.

The living organism is an aggregation of innumerable cells and the beginnings of disease could only be detected by the microscopic examination of individual cells. Obviously any such examination is beyond the reach of radiology. Nevertheless, radiology is of the utmost value in revealing early tuberculous disease, and its value depends partly upon a curious and imperfectly understood phenomenon known as "allergy," which might be described as the macroscopical reaction of the body tissues to a microscopical stimulus. Thus, though we cannot photograph the shadow of the early tuberculous focus, we can obtain a picture of the body's reaction to that focus. A child is exposed to tuberculous infection by living in the company of a consumptive, or by drinking the milk of a tuberculous cow. Whether the germs of disease are inhaled or swallowed, having gained entrance to the body they

are deposited in the tissues and, unless the infection is overwhelming by reason of its amount or intensity or of a low resistance on the part of its victim—in which event death from generalised tuberculosis may occur within a few weeks—they are held up in the lymphatic system of the body which acts as a filter to prevent poisons reaching the blood stream. The first attack is thus overcome and most children encounter tuberculous infection early in life without appearing to be any the worse for it. But none the less a profound change occurs in all the tissues of the unwitting host as the result of such infection. Readers of *Conrad's "Nigger of the Narcissus"* will remember how the presence of a consumptive negro affects the temper of a whole ship's crew. The nigger remains in his bunk, but an irritability pervades the vessel and has its influence upon every individual from captain to cabin boy. We might say that the crew is in an "allergic" state, a poison located at one spot has affected the whole ship. When tubercle bacilli are deposited in the glands of a hitherto unaffected child the tissues of the whole body become affected, they become irritable and resentful to that particular poison. If a further infection occurs, this irritability is manifested by a brisk reaction wherever the re-infection has occurred and this reaction is accompanied by the outpouring of fluid from the blood vessels at the threatened point. This phenomenon is made use of in tuberculin skin tests, for if a child's tissues are "allergic" we know that infection must have taken place. We can demonstrate this by lightly scratching the child's arm and applying to the scratch a drop of tuberculin, material obtained from the bodies of devitalised bacilli. If there has been previous infection, a wheal develops at the site of the scratch wherever the scratch be made, and this is due to serous fluid exuded from the capillaries into the tissues. Let us now suppose that a child, whose tissues have been thus sensitised to the tubercle bacillus and its poisons, receives a further dose of infection, not as tuberculin rubbed into a skin abrasion, but as a further deposit of living bacilli in the lungs. The child is in the "allergic" state, and the bacilli will no longer filter harmlessly into the lymphatic glands, but wherever they are deposited will cause resentment and this will be expressed by a violent local reaction, accompanied by the outpouring of serous fluid into the surrounding tissues or air cells. Fluid is opaque to X-rays and thus casts a shadow in the X-ray picture, which provides indirect evidence of tuberculous invasion at a time when tuberculous foci are themselves too insignificant to cast a recognisable shadow on a radiographic plate.

Sometimes a whole lobe will be involved in this process and half a lung be "water-logged." Sometimes the covering membranes of the lungs are chiefly implicated and pleurisy with effusion, "water on the lung" causes a characteristic shadow in the X-ray picture. At the same time the lymphatic glands of the chest, which are especially numerous around the lung roots, are usually acutely swollen and these also are in favourable circumstances, visible in the X-ray. The reactions are usually short lived; the fluid exudation clears up in the course of weeks or months and complete recovery is the rule. During

their course they give rise to singularly little disturbance. They are in fact often discovered more or less accidentally when a child who has been exposed to the risk of infection is examined as a "contact" or is noticed by a relative to have a slight cough or to seem out of sorts. We speak of these cases as "Pulmonary Tuberculosis of the Juvenile Type." We owe their recognition chiefly to radiology for though physical examination may reveal some abnormality, the evidence supplied by the old methods of investigation is usually inconclusive and often completely misleading. As already indicated, our observations during recent years have proved that this form of tuberculosis is relatively benign, self-limiting and spontaneously healing. But it is obviously a wise precaution to place a child in this condition in the best possible surroundings, and children so affected are in Essex admitted to Black Notley and retained there until the patient's general condition is satisfactory and serial skiagrams show that the lungs are clear.

We do not know yet what the future story of these children who compose the majority of the cases of juvenile pulmonary tuberculosis treated at Black Notley will be. In some, no doubt, the tubercle bacillus, baffled for the moment, will bide its time and in later adolescence break out again to cause consumption. But we do not know whether children who have suffered from this juvenile type of tuberculosis will be more prone to consumption in later life than those who have received a mild primary infection that has not been followed by these allergic manifestations. The latter group is far larger than the former.

The conditions which we have been considering are not common, though on account of their benign course and spontaneous resolution many cases must escape observation and diagnosis. Further study has only confirmed the opinion previously expressed in these reports that consumption of the adolescent or adult type is so rarely encountered in childhood that very few Sanatorium beds should suffice to meet the needs of the whole County. Generalised tuberculosis, a form of tuberculous blood-poisoning, rapidly leading to a fatal issue, is outside the scope of this paper, but it is at present the subject of a special investigation, the results of which will be reported in due course.

(2) *The Catarrhal Group.*

Simple bronchitis is one of the commonest of children's complaints, and as it afflicts all classes we cannot assign either bad housing, insufficient clothing or inadequate diet as its cause. Bronchitis may be an episode in the life of a healthy child, but the cases we are now to consider come into an entirely different category.

Certain conditions of chronic septic infection in childhood may be suitably grouped together as the dirt diseases—not infrequently they are the evidence of medical neglect usually associated with social neglect. The running ear, the dribbling nose, the scabbed skin, are included in this group. The chronic pulmonary catarrhs are of the same lineage. Chronic pulmonary catarrh is

the result of an infection of the lungs due to a variety of organisms whose favourite breeding grounds are the air passages. They are present to a greater or less extent in the mucous membranes of the nose and throat of normal persons and are always associated with the common catarrhs of the upper air way.

In many debilitated children living in squalid or unhygienic surroundings the organisms spread downwards to take up a permanent abode in the bronchial tubes and air cells of the bases of the lungs. Here they give rise to a succession of acute attacks of catarrh accompanied by fever and often terminating in broncho-pneumonia. In the intervals between the acute attacks chronic catarrh remains and the child is seldom free from cough. Nor is this all, for broncho-pneumonia often causes permanent damage to the lungs, healthy tissue being replaced by scar tissue which diminishes the surface available for aeration of the blood, and impedes the pulmonary circulation. The final stage in the degradation of lung tissue is reached when, as the result of damage to the bronchial walls and the stagnation of secretions in the tubes a condition known as bronchiectasis develops. This is a peculiarly distressing disease in which a veritable lung-rot occurs. The dilated bronchial tubes become filled with putrid secretion, cavities with ulcerated walls form breeding pools for every variety of septic infection and sooner or later death from septic pneumonia terminates a miserable existence. Fortunately only a small proportion of cases of pulmonary catarrh lead to such a tragic end.

We should never forget that permanent damage to the lungs is specially apt to follow the broncho-pneumonia which often complicates whooping cough and measles. The former has always been recognised as a distressing complaint but the latter is still too lightly regarded. Scarlet fever, living on an evil reputation gained in former days, is still regarded as the Big Bad Wolf of the nursery and adequate arrangements are made for the treatment of its victims. The ravages of measles are far more deadly and the care, especially the after-care, of sufferers from this complaint demands much greater concern than it usually receives. It is possible that an extension of the use of convalescent measles serum may in the future reduce the number of these tragic results of measles-pneumonia.

The child suffering from chronic catarrh is recognisable almost at a glance. The complexion is sallow and unhealthy, growth is stunted and nutrition poor, the bones of the chest project through a thin covering of flesh; the prominence of the ribs being often accentuated by the condition of "pigeon chest," due partly to rickets and partly to imperfect expansion of the lung bases. On physical examination of the chest the characteristic signs of catarrh are readily elicited, for in contrast with tuberculous conditions, the stethoscope as a rule provides clearer evidence of disease of this type than a skiagram supplies. Even when bronchiectasis is present special methods of radiological examination may be required to demonstrate the disease.

Sufferers from chronic catarrh of this type may be divided into three groups.

(1) *Chronic Catarrh of the Lung Bases.* The child is seldom free from cough in winter, and is liable to acute attacks, any one of which may lead to broncho-pneumonia.

(2) *The Damaged Lung.* An attack of broncho-pneumonia is not followed by complete resolution. Inflammation is followed by scarring of the pulmonary tissue and this scarring is permanent for in the body scar tissue can never grow into specialised tissue no matter how robust the body may become.

(3) *Bronchiectasis.* The meaning of this term has already been explained. When a lobe of a child's lung has been converted into a sponge soaked in pus, death is almost inevitable before adult life is attained. A less serious variety "dry bronchiectasis," in which there is little or no sputum but a tendency to blood spitting also occurs, a symptom which often suggests an erroneous diagnosis of consumption.

The Prevention of Tuberculosis in Childhood.

The problem of pulmonary tuberculosis in childhood is one of comparatively minor importance in this country. As we have seen it is with rare exceptions, a benign disease. Surgical tuberculosis in childhood, *i.e.*, tuberculosis of bones, joints, and glands, provides far graver problems.

It may be difficult at the present time to ensure that every herd of cows is tubercle free. It would be by no means difficult to ensure that every glass of milk supplied to a child is tubercle free—whether pasteurisation or boiling is adopted to ensure this. Within a few years we should then be able to reduce the number of beds in our Sanatoria for the treatment of tuberculosis of bones and joints, institutions which should not be a source of pride, however attractive in appearance or complete in equipment, but a constant reminder of our failure to protect childhood from preventable suffering and death.

But the cleansing of our milk supply would do little to protect children against the risk of infection from tuberculosis of human origin which is usually responsible for pulmonary tuberculosis. One rule, if supported by the common sense of the community, should, however, suffice to reduce the risks of pulmonary tuberculosis in childhood to negligible proportions. A child should not be permitted to associate with a consumptive, whatever their relationship, unless adequate safeguards against infection can be guaranteed. We all know that it is dangerous for a child to associate with a consumptive whose sputum contains tubercle bacilli and it is strange that we still permit the free association of childhood and disease. It is true that the infectious adult can be taught to dispose of his expectorations innocuously, and free ventilation will carry away the germ laden spray of the occasional unguarded cough. Experience at Papworth suggests that the risks run by a child living in the company of a consumptive are small if the patient is clean in his habits and social circumstances are favourable. But the risks of infection in early in-

fancy are so grave that extreme precautions are essential and our rules should be absolute. An infant born of a consumptive mother should be removed from her care at birth, and the segregation should be maintained as long as the parent remains in an infectious condition. Such a rule might go far to prevent the marriage of consumptives, often so lightly undertaken to-day, and would safeguard a new-born child from most dangerous company. It is curious to reflect that a parent who fails to provide a fireguard is liable to legal penalty while a parent who exposes a child to the risks of tuberculous meningitis is held to be free from blame. I have known a consumptive proposing marriage to declare himself to be only interested in its possible effect on himself and to state that he was not interested in the question of whether his children might suffer. Few patients are equally frank, but very many are equally callous to the possible effects of their actions.

The Prevention of Non-Tuberculous Lung Infection in Childhood.

Where tuberculosis is concerned, the way seems fairly plain. What are we to do for the innumerable army of children suffering from pulmonary catarrh? What have we done in the past, and what are we doing now?

The second question is quickly answered. We have assumed that it is only natural that during several months of the year coughing should drown the teacher's saw. And for the rest we have instituted a ritual circumcision of the tonsils which recently threatened to become almost universal in its application, though happily the cult is now declining. It is true that grossly infected tonsils and masses of adenoid tissue in the naso-pharynx should be removed, but in a large proportion of cases the excision of lymphatic tissue from the upper air-way is useless where it is not harmful. And to remove these natural filters from their proper place is as sensible as the removal of a doormat and boot-scraper would be by a housewife annoyed at the amount of dirt the children brought into the house. In other words, if the whole air-way is infested with bacteria down to its terminal ramifications an attempt to cleanse the portals of the whole system will not accomplish much.

We have already remarked that the chronic pulmonary catarrhs of early life should be classed with the dirt diseases. And as we should expect, though chronic non-tuberculous infection of the lungs is not unknown as a sequel of pneumonia in other strata of society, in the main the condition is associated with over-crowding, bad housing and poverty. Among slum dwellers the disease may spread to several members of the same family. The child who by day sits in an overcrowded class room and by night sleeps in an overcrowded bedroom cannot hope to escape a greater or smaller degree of infection. It is probable that malnutrition plays a much smaller role in predisposing to non-tuberculous infections of the lungs than it does in determining susceptibility to tuberculosis, a disease to which the ill-nourished are notoriously prone to succumb.

The object of all public health administration is the prevention of disease and schemes to provide more healthy conditions for the community as a whole

are rightly considered of more importance than attention to the needs of the units which compose it. From this point of view the administrator may claim that if he takes care of the pounds the pence will take care of themselves. But the health of the child community provides a valuable index by which to judge of the success or failure of efforts to improve social conditions, and a careful study of the incidence of pulmonary catarrh should provide a useful commentary on the sanitary condition of schools and homes. We possess reliable statistics of the number of tuberculous children in the county. We have no comparable figures to show the number of children suffering from the effects of chronic pulmonary catarrh, from lungs permanently damaged by inflammatory lesions or from bronchiectasis. Such information is necessary if adequate measures are to be taken to eradicate forms of disease which are the cause of much disability and suffering in childhood and which pave the way for chronic pulmonary disease in later life.

A few comments on this delightful and instructive contribution to the Annual Report by Dr. Burton Wood might be inserted here.

Children suffering from non-tuberculous chest diseases who are under school age, may receive assistance under a Maternity and Child Welfare Scheme, whilst for children of school age, the Educational Authorities can give assistance. For reasons well known, Educational Authorities generally do not go out of their way to provide treatment for this class of child and it might be helpful if it could be arranged that Education Authorities should ascertain the physical defect, and then hand the child over to the Public Health Authority to carry out any necessary treatment.

At the present time the only Committee of the County Council which is in a position to carry out the suggestions made by Dr. Burton Wood in respect to children suffering from non-tuberculous chest disease is the Public Assistance Committee, and it will be a matter for consideration in the future to decide if and how such necessary treatment could be given.

In respect to the investigation of children suffering from catarrh, pages 112-114 of the Annual Report for 1928 give a short digest of an investigation into the health of children under school age, which was carried out by Dr. Mary Rankine, over a period of three years, at the request of the Ministry of Health.

TABLE XVII.

(b) NON-PULMONARY TUBERCULOSIS.

Table showing in summary form (a) the condition at the end of 1933 of all patients remaining on the Dispensary Register and (b) the reasons for the removal of all cases written off the Register.

Condition at the time of the last record made during the year to which the Return relates.			Previous to 1926.					1926.					1927.					1928.					1929.					1930.					1931.					1932.					1933.						
			Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.	Bones and Joints.	Abdominal.	Other Organs.	Periphereal Glands.	TOTAL.												
(a) Remaining on Dispensary Register on 31st December.	Disease arrested.	Adults. M.	11	3	1	1	16	2	2	4	1	1	...	6	4	1	5	3	...	2	1	6	5	1	6	5	2	1	3	11	4	1	1	2	8	2	...	2	...	4			
		Adults. F.	8	2	4	3	17	3	...	2	2	7	3	...	3	2	8	2	5	1	3	11	1	2	2	8	13	5	3	2	2	12	8	2	1	2	13	2	2	1	5	10	1	1	2		
	Children.	M.	39	7	6	21	73	11	3	1	13	28	18	5	...	18	41	6	3	1	20	30	10	7	6	35	58	11	7	4	32	54	9	7	...	26	42	6	4	1	20	31	2	4	...	9	15		
		Adults. F.	9	3	10	7	29	2	1	6	2	11	5	...	1	2	8	2	1	1	1	5	5	1	3	3	12	4	2	...	1	7	9	7	5	2	23	8	5	7	9	29	15	16	5	9	45		
	Children.	M.	31	1	4	2	38	7	1	...	8	16	13	1	1	3	23	10	8	18	12	3	...	15	30	19	3	1	22	45	23	5	6	44	78	29	12	2	52	95	25	12	6	62	105		
		Adults. F.	3	...	1	1	5	1	...	1	...	2	...	2	2	3	7	1	1	1	2	3	2	...	2	...	4	1	3	4			
Total on Dispensary Register at 31st December...			111	17	33	86	197	28	6	10	25	69	50	10	10	29	99	25	10	5	33	74	37	14	16	66	133	49	17	12	62	140	63	25	16	83	187	60	25	17	89	191	55	36	20	88	199		
Transferred to Pulmonary	1	1	1	...	1	1	1	1	...	5	1	1	1	...		
(b) Not now on Dispensary Register and reasons for removal therefrom.	Discharged as recovered.	Adults. M.	22	5	3	7	37	4	1	1	4	10	4	...	1	5	10	5	2	1	1	9	1	1	2		
		Adults. F.	30	7	3	22	62	3	4	4	5	16	1	2	...	1	4	1	3	2	3	9	...	2	...	2	4	1	...	1	1	3		
	Children.	M.	76	27	19	139	261	15	6	3	32	56	10	7	1	29	47	13	4	1	16	34	2	5	...	11	18	3	5	8		
		Adults. F.	257	135	97	194	683	91	47	26	147	311	64	21	14	58	157	51	23	18	70	162	44	23	14	72	153	29	12	8	84	133	16	21	11	41	89	17	8	5	29	59	7	4	2	9	22		
	Lost sight of or otherwise removed from Dispensary Register ...	M.	21	3	6	4	34	2	1	3	...	3	1	1	5	2	...	1	2	5	3	2	2	...	7	2	...	2	1	5	1	1	2	3	7	1	1	1	...	3	1	...	1		
		Adults. F.	9	3	2	3	17	4	1	...	1	6	5	5	1	1	12	2	2	2	1	7	1	1	...	1	3	3	...	1	1	5	1	1	2	2	2	...	4	1	1		
	Children.	M.	12	4	2	2	20	8	2	1	...	11	4	2	...	1	7	2	2	...	3	7	2	1	3	3	1	4	5	3	3	...	11	2	2	4	1	1	2
		Adults. F.	427	184	132	371	1114	127	62	35	189	413	88	40	18	96	242	76	36	25	96	233	52	34	17	87	190	41	13	12	92	158	23	26	16	44	109	22	13	6	29	70	9	5	3	9	26		
	Total written off Dispensary Register ...			427	184	132	371	1114	127	62	35	189	413	88	40	18	96	242	76	36	25	96	233	52	34	17	87	190	41	13	12	92	158	23	26	16	44	109	22	13	6	29	70	9	5	3	9	26	
	GRAND TOTALS of (a) and (b) (excluding those transferred to Pulmonary) ...			538	201	165	407	1311	155	68	45	214	482	138	50	28	125	341	102	46	30	129	307	89	48	33	153	323	90	30	24	154	298	86	51	32	127	296	82	38	23	118	261	64	41	23	97	225	

TABLE XXIII.

Table giving Particulars of the various Voluntary Hospitals serving the Administrative County of Essex.

Name of Hospital.	Total No. of Beds.	Average No. of Beds occupied.	Total No. of In-Patients in 1933.	Total No. of Out-Patients in 1933.	Extent and Nature of Waiting List.	Key.
(a) GENERAL HOSPITALS.						
*Bishops Stortford Hospital ..	61	45.93	725	—	38 S. and T. & A.	—
Chelmsford & Essex Hospital ..	120	108.6	1,877	1,670	64 S. ; 13 M. ; 140 T. & A.	S.—Surgical.
Connaught Hospital, Walthamstow ..	116	88.42	1,430	13,210	193 E.N. & T. ; Gen. 57 ; Gynsec. 27 ; M. 10.	M.—Medical.
*East Ham Memorial Hospital ..	100	92.5	1,400	10,006 New. 50,640 Atts.	M. 13 ; S. 60 ; E. N. & T. 30 ; Gyn. 19 ; Orth. 4 ; Oph. 1 ; Massage 14.	T. & A.—Tonsils and Adenoids.
Essex County Hospital, Colchester ..	160	128	2,193	9,295—55,151 Atts.	M. 13 ; S. 70.	E. N. & T.—Ear, Nose and Throat.
Forest Hospital, Buckhurst Hill ..	40	25	572	288	None	Gyn.—Gynaecological.
King George Hospital, Ilford ..	142	148.8	3,048	24,018—102,863 Atts.	M. 9 ; S. 156 ; Gyn. 22 ; E. N. & T. 168	Orth.—Orthopaedic.
*St. Mary's Hospital for Women and Children, Plaistow	71	72	1,136	9,222	60—Mainly S. and Gyn.	Oph.—Ophthalmic.
Saffron Walden General Hospital ..	34	22	503	388	Unable to say.	Gen.—General.
*Southend-on-Sea General Hospital ..	235	206	3,260	11,539	S. 185 ; M. 10 ; Skin 2 ; Oph. 4 ; Gyn. 115.	
Tilbury (Seamen's Hospital Society) ..	92	62.92	1,221	4,278	T. & A. 20 (approx.)	
*Queen Mary's Hospital, Shalford ..	219	189	3,703	144,156 Atts.	Large one.	
Woodford Jubilee Hospital ..	49	27.4	510	Nil.	Nil.	
(b) SPECIAL HOSPITALS.						
Brookfield Orthopaedic Hospital ..	30	26	81	Nil.	Nil.	
*Plaistow Maternity Hospital ..	60	59.63	1,607	22,095	Fully booked up.	
*Invalid and Crippled Children's Society Hospital, Plaistow	36	30.145	1,310	14,381	186 Aural and Orth.	
*Albert Dock Hospital (Seamen's) London	53	44.80	662	5,657	Nil.	
(c) COTTAGE HOSPITALS.						
William Julien Courtauld, Braintree ..	20	13	323	271	Nil.	
Brentwood District Hospital ..	19	15	262	X-ray 487 Mass. 301	About 40 Operation Cases	
Clacton & District Hospital ..	32	17	349	329 and 165 daily dressings.	T. & A. and Minor Ops.	
Eden Cottage Hospital, Hatfield Broad Oak	7	3 or 4	36	20	Nil.	
Epping & District Cottage Hospital ..	11	8	385	Nil.	Nil.	
Halstead Cottage Hospital ..	14	9.4	231	102	Nil.	
Harwich & District Hospital ..	26	13.34	333	1,050	28 (chiefly T. & A.)	
Ongar & District War Memorial Hospital	20	16	206	Nil.	Nil.	
Romford Victoria Hospital ..	31	22	568	Nil.	50 (various)	
*St. Leonard's Hospital, Sudbury ..	30	18.32	364	175	T. & A. and S.	
Waltham Abbey War Memorial Hospital	16	11	313	130	T. & A. and Major Ops.	

* It should be carefully noted that these hospitals are situated outside the Administrative County and only to a small extent serve patients coming from the Administrative County.

TABLE XIX.

SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF DEFINITELY
TUBERCULOUS PATIENTS DISCHARGED FROM INSTITUTIONS DURING
THE YEAR.

Classification on admission to the Institution.	Condition at time of discharge.	Duration of Residential Treatment in the Institution.															GRAND TOTALS.		
		Under 3 months.			3-6 months.			6-12 months.			More than 12 months.			TOTALS.					
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.			
PULMONARY TUBERCULOSIS.		Class T. B. minus.	Quiescent ...	11	15	1	10	15	3	3	2	3	1	7	1	25	39	8	72
			Not quiescent ...	25	8	1	11	14		6	8	1	1		1	43	30	3	76
			Died in Institution	5	3		1			1	1					7	4		11
PULMONARY TUBERCULOSIS.		Class T. B. plus. Group 1.	Quiescent ...	1	3		2	9	1	6	2		1	2		10	16	1	27
			Not quiescent ...	9	5		7	3		2	1		1	1		19	10		29
			Died in Institution				2	1					2			4	1		5
PULMONARY TUBERCULOSIS.		Class T. B. plus. Group 2.	Quiescent ...	8	11		15	15		6	4		4	5		33	35		68
			Not quiescent ...	48	25		35	25	2	15	19	1	5	5		103	74	3	180
			Died in Institution	15	5		10	2		2	3		5			32	10		42
PULMONARY TUBERCULOSIS.		Class T. B. plus. Group 3.	Quiescent ...																
			Not quiescent ...	1	2		2			2			1			6	2		8
			Died in Institution	2	2					1						3	2		5
TOTALS (pulmonary)				125	79	2	95	84	6	44	40	5	21	20	2	285	223	15	523
NON-PULMONARY TUBERCULOSIS.		Bones and Joints.	Quiescent ...	1	1	5	5	4	11	3	2	10			21	9	7	47	63
			Not quiescent ...	3		1	4	5			2	3	3			10	7	4	21
			Died in Institution			1		1	1								1	2	3
NON-PULMONARY TUBERCULOSIS.		Abdominal.	Quiescent ...	1	4	2		2	3	1	1	6				2	7	11	20
			Not quiescent ...		1	1	2									2	1	1	4
			Died in Institution																
NON-PULMONARY TUBERCULOSIS.		Other Organs.	Quiescent ...	2	2		1					1				3	2	1	6
			Not quiescent ...	1	4		2		1			1				3	4	2	9
			Died in Institution																
NON-PULMONARY TUBERCULOSIS.		Peri-pheral Glands.	Quiescent ...		5	11	1	2	20	1		13			1	2	7	45	54
			Not quiescent ...			1		1	6	1		1			1	1	8	10	
			Died in Institution																
TOTALS (non-pulmonary)				8	17	22	15	15	42	6	5	35	3		22	32	37	121	190

TABLE XX.

(a) SHOWING THE EXTENT OF RESIDENTIAL TREATMENT AND OBSERVATION DURING THE YEAR 1933 IN INSTITUTIONS (OTHER THAN PUBLIC ASSISTANCE INSTITUTIONS).

		In Institu- tions on Jan. 1st. (1)	Admitted during the year. (2)	Discharged during the year. (3)	Died in the Insti- tions. (4)	In Institu- tions on Dec. 31st. (5)
Number of doubtfully tuberculous cases ad- mitted for observation	Adult males	3	31	33	1	—
	Adult females	2	23	24	—	1
	Children	11	49	53	—	7
	Total	16	103	110	1	8
Number of definitely tuberculous patients admitted for treatment	Adult males	195	349	271	46	227
	Adult females	161	274	243	18	174
	Children	119	144	134	2	127
	Total	475	767	648	66	528
GRAND TOTAL		491	870	758	67	536

(b) SHOWING THE EXTENT OF RESIDENTIAL TREATMENT PROVIDED DURING THE YEAR 1933 IN PUBLIC ASSISTANCE INSTITUTIONS.

		In Institu- tions on Jan. 1st. (1)	Admitted during the year. (2)	Discharged during the year. (3)	Died in the Insti- tions. (4)	In Institu- tions on Dec. 31st. (5)
Number of patients suffering from pulmon- ary tuberculosis ad- mitted for treatment	Adult males	45	145	81	59	50
	Adult females	52	122	75	55	44
	Children	—	1	1	—	—
	Total	97	268	157	114	94
Number of patients suffering from non-pul- monary tuberculosis admitted for treatment	Adult males	10	6	3	2	11
	Adult females	16	11	7	2	18
	Children	2	7	2	2	5
	Total	28	24	12	6	34
GRAND TOTAL		125	292*	169	120	128

*Of this number 23 were admitted under the County Tuberculosis Scheme and therefore chargeable to the Public Health Committee.

(c) SHOWING THE RESULTS OF OBSERVATION OF DOUBTFULLY TUBERCULOUS CASES DISCHARGED FROM INSTITUTIONS DURING 1933.

Diagnosis on discharge from observation.	FOR PULMONARY TUBERCULOSIS.						FOR NON-PULMONARY TUBERCULOSIS.						TOTALS.		
	Stay under 4 weeks.			Stay over 4 weeks.			Stay under 4 weeks.			Stay over 4 weeks.					
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.
Tuberculous	2	—	1	4	8	8	1	—	1	1	2	6	8	10	16
Non-tuberculous ..	10	2	6	10	7	7	1	4	4	4	1	19	25	14	36
Doubtful	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Died	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
TOTALS	13	2	7	14	15	15	2	4	5	5	3	26	34	24	53

TABLE XXI.

TUBERCULOSIS CARE ASSOCIATIONS IN ESSEX.

(The information given in this Table is in respect to the year ended 31st March, 1934).

Name of Association.	Day and Time of Meetings.	Income including Balance in hand.	Expenditure.		Total No. of Cases assisted.	Nature of Assistance Provided.
			Assistance.	Other Items.		
BARKING ...	Third Wednesday in each month at 8 p.m.	£ s. d. 290 8 7	£ s. d. 145 12 0	£ s. d. 5 2 11	37	Extra Nourishment Clothing
CHELMSFORD ...	Fourth Monday in each month at 7 p.m. (except August)	413 19 2	152 8 2	38 11 9	38	Extra Nourishment Convalescent Holiday Treatment Boots, Clothing, Fares, &c.
DAGENHAM ...	Third Thursday in each month at 8.15 p.m.	395 18 8	227 16 9	26 19 11	56	Extra Nourishment Fares
GRAYS ...	Third Monday in each month at 5.30 p.m.	267 7 4	134 19 2	15 5 3	34	Extra Nourishment Clothing, Bedding, &c. Fares, Employment
HALSTEAD ...	Second Tuesday in each month at 3 p.m. (except August)	Drawn from Central Fund of Halstead Care of Children Committee	1 0 0	1 5	1	Grant towards cost of Surgical Boots
ILFORD ..	First Thursday in each month at 7.30 p.m.	742 1 0	549 11 5	26 15 3	80	Extra Nourishment Fares
I KYTON ...	Third Friday in each month at 7.30 p.m.	623 17 11	355 18 10	45 2 9	100	Extra Nourishment Convalescent Holiday Treatment Advisory Employment
ROMFORD ..	Fourth Thursday in each month at 8 p.m.	572 8 9	310 5 4	18 12 0	60	Extra Nourishment Convalescent Holiday Treatment Fares Employment Advisory
SAFFRON WALDEN	Fourth Tuesday in each month at 2.30 p.m.	150 14 2	129 6 4	5 4 6	41	Extra Nourishment Convalescent Holiday Treatment
WALTHAMSTOW	First Friday in each month at 7 p.m.	614 7 5	321 11 3	46 3 10	141	Extra Nourishment Convalescent Holiday Treatment Dentures, part cost Advisory

PART III.

MATERNITY AND CHILD WELFARE ACT, 1918. NOTIFICATION OF BIRTHS ACTS, 1907 & 1915.

(1) COUNTY AREA. The County Council was responsible during the year 1933 for administering the above Acts in the following 37 Sanitary Districts.

The information in the following table is obtained from (a) the births actually notified to the County Health Department, (b) particulars of unnotified births furnished by the local Registrars of Births and Deaths, and (c) notifications of Puerperal Fever and Ophthalmia Neonatorum as given by the Registrar-General :—

TABLE XXII.

Sanitary Districts.	Acreage	Census Popula- tion, 1931.	No. of Births notified by		No. of Births Unnoti- fied.	No. of Notifi- cations of	
			Mid- wives.	Doctors and Parents.		Puer- peral Fever.	Oph- thalmia Neona- torum.
Maldon B. ...	3,004	6,559	21	58	...	1	...
Saffron Walden B. ...	7,502	5,930	31	20	1	...	...
Benfleet U. ...	6,356	12,091	74	37	8	...	...
Braintree U. ...	2,224	8,912	81	66	4	...	...
Brentwood U. ...	460	7,209	47	57	1	...	...
Brightlingsea U. ...	2,852	4,145	2	33	4	...	...
Burnham-on-Crouch U. ...	4,507	3,395	29	22	...	...	...
Canvey Island U. ...	4,351	3,530	42	7	...	...	...
Chingford U. ...	2,810	22,051	98	150	60	2	...
Epping U. ...	1,420	4,956	25	71	3	...	...
Frinton-on-Sea U. ...	419	2,196	3	11	...	...	...
Halstead U. ...	649	5,878	30	41	2	...	...
Hornchurch U. ...	6,783	28,417	220	341	19	5	...
Purfleet U. ...	8,900	8,511	96	52	2	...	1
Rayleigh U. ...	5,644	6,256	45	26	7	...	...
*Shoeburyness U. ...	1,031	6,717	74	13	1	...	3
Waltham Holy Cross U. ...	11,016	7,115	17	49	4	...	...
Walton-on-the-Naze U. ...	1,951	3,066	8	21	2	...	...
West Mersea U. ...	3,171	2,067	...	21	1	...	...
Witham U. ...	3,712	4,367	42	22	...	...	...
Wivenhoe U. ...	1,562	2,193	2	21	1	...	...
Belchamp R. ...	26,501	3,983	22	17	...	...	...
Billerica R. ...	49,393	39,694	357	234	7	3	2
Braintree R. ...	62,352	21,876	128	148	5	1	...
Bumpstead R. ...	11,873	2,304	18	7	1	...	...
Chelmsford R. ...	83,045	28,646	249	107	14	3	1
Dunmow R. ...	73,501	15,564	111	93	10	...	2
*Epping R. ...	39,057	17,345	94	86	9	...	2
Halstead R. ...	38,715	9,843	42	72	1	...	...
Lexden & Winstree R. ...	66,246	18,970	97	127	5	1	...
Malden R. ...	81,961	16,280	128	102	...	...	1
Ongar R. ...	47,236	11,520	93	83	2	...	...
Rochford R. ...	38,465	17,046	146	388	14	3	3
Romford R. ...	16,376	15,102	101	116	4	1	2
Saffron Walden R. ...	59,976	9,691	82	44	1	1	...
Stansted R. ...	22,952	6,981	43	35	5	...	...
Tendring R. ...	72,239	24,083	226	132	3	2	...
Totals ...	870,212	414,489	2,927	2,930	201	23	17

* Under Section 46 of the Local Government Act, 1929, the Urban District of Shoeburyness was abolished and formed part of Southend-on-Sea County Borough from 1st October, 1933. From the same date the Parish of Chigwell ceased to form part of the Rural District of Epping and together with the Urban Districts of Buckhurst Hill and Loughton became a new Urban District called Chigwell which is at present an autonomous Child Welfare Authority.

(2) **MEDICAL STAFF.** Particulars in regard to the Medical Staff are given on page 7. Dr. J. L. Miller Wood commenced duty as First Assistant County Medical Officer for Maternity and Child Welfare in February, 1933.

(3) **HEALTH VISITORS.** Owing to the increase of work in the Hornechurch and Romford Area it was necessary to appoint an additional Health Visitor in this district. For the same reason, when the probationer Health Visitor in Chingford qualified, she was appointed on the whole-time staff for that district, commencing October, 1933. An additional Health Visitor was also approved for the Braintree Area, but she did not actually commence duty until January, 1934. Facilities were granted to a member of the Health Visiting Staff to train for the new Health Visitors' Certificate by being appointed as probationer Health Visitor under the Council's scheme.

A successful Conference of the County Health Visitors was held on 28th April, 1933, the chief items for discussion being Infant Life Protection duties and co-operation with Voluntary Committees.

On 1st January, 1934, the Health Visiting Staff undertaking Child Welfare work on behalf of the County Council numbered as follows :—

Whole-time (also undertaking School and Tuberculosis duties)	34	} Equivalent whole-time H.V. for C.W. = 15 (approx.)
Whole-time (part-time C.C. and part-time L.A.) ..	2	

N.B.—The above figures do not include the Chief Health Nurse and her Assistant.

The District Nurse-Midwives continued to assist the Health Visitors as far as possible.

(4) **ANTE-NATAL CLINICS AND CHILD WELFARE CENTRES.** At the end of the year 1933 there were 15 Ante-Natal Clinics and 90 Child Welfare Centres, not including Weighing Centres, in the County Child Welfare Area. During the year Ante-Natal Clinics were established at Canvey Island, Felsted, Rochford and Witham, and Child Welfare Centres at Fingringhoe, Kirby-le-Soken, Little Waltham and Woodham Ferrers. The Messing Centre was transferred to Tiptree.

On 6th November, 1933, an excellent Conference was held of representatives from each of the Voluntary Committees who render such splendid service in connection with the Child Welfare Centres. A frank and helpful discussion of various problems took place and it was decided to make this Conference an annual one.

By arrangement with the National Milk Publicity Council, their Demonstrator has, free of charge, given demonstrations throughout the year at the Child Welfare Centres, showing the mothers the various methods of using and preparing milk in a dietary. These have been very much appreciated and in some cases she has been asked to make a return visit.

(5) **COMBINED TREATMENT CENTRES.** Reference is made to Combined Treatment Centres on page 89 of this Report.

(6) **PROVISION OF MILK.** The two schemes outlined in the report for the year 1922, for the provision of Milk (a) for districts served by Centres, and (b) for districts not served by Centres were continued, with the slight amendment to the scale for determining necessitous cases set out in the Report for the year 1928.

In March, 1933, the scheme was slightly extended to include expectant mothers in the last six months of pregnancy instead of the last three months.

The County Medicament Scheme outlined in the previous year's report proved successful and after completion of the experimental period of twelve months, was continued.

(7) **DENTAL TREATMENT AND DENTURES.** In view of the difficulty experienced by Local Voluntary Committees of Child Welfare Centres in providing 25 per cent. of the net cost of treatment and dentures, the scheme was revised from 1st April, 1933, and the whole cost of the dental treatment and dentures (less the patient's contribution) is now paid by the County Council. By arrangement with the Education Committee, endeavours are made where possible, to utilise the services of the whole-time School Dental Surgeons, the patients being charged for their services 2s. 6d. per course of treatment, plus an additional fee of 5s. where a general anæsthetic is necessary. During the year under review a total of 172 patients were treated at a cost to the Committee of £435 15s. 2d., of which £69 0s. 6d. was recovered from patients as contributions.

(8) **HOME HELPS.** Ten applications were received during the year as follows :—Great Bardfield (1), Braintree (2), Brightlingsea (1), Chigwell (1), Maldon (1), Rivenhall and Silver End (1), Stebbing (1), Thaxted (1) and Tollesbury (1).

(9) **TRAVELLING EXPENSES OF MOTHERS ATTENDING CHILD WELFARE CENTRES.** At the end of the year 1933 twenty-six Child Welfare Centres were participating in the scheme, namely :—Bardfield, Bocking, Burnham-on-Crouch, Danbury, Debden and Wimbish, East Hanningfield, Eastons, Epping, Felsted, Fordham, Great Horkesley, Harlow, Ongar, Purleigh, Radwinter, Rivenhall and Silver End, Rochford, Stansted, Stebbing, Terling, Thaxted, Tollesbury, Little Waltham, Wethersfield, Woodham Ferrers and Great Yeldham.

(10) **PUBLIC HEALTH (NOTIFICATION OF PUERPERAL FEVER AND PUERPERAL PYREXIA) REGULATIONS, 1926.** During the year ended 31st December, 1933, copies of notifications made by medical practitioners were received from Medical Officers of Health in the Administrative County and the County Child Welfare Area as follows :—

	Administrative County.				C.C. Child Welfare Area.			
	1930.	1931.	1932.	1933.	1930.	1931.	1932.	1933.
Puerperal Fever ..	73	80	58	50	31	20	20	23
Puerperal Pyrexia	106	156	123	150	31	44	37	50

(See also page 82).

(i) *Obstetric Specialist.* The arrangements for the services of the Obstetric Specialist, Andrew McAllister, Esq., F.R.C.S., of 79, Wimpole Street, W.1, previously referred to, were continued. It was not, however, found necessary to call him into consultation.

The services of the First Assistant County Medical Officer, Dr. J. L. Miller Wood, M.M.S.A., were utilized for such cases from time to time where necessary. During the year 7 abnormal obstetrical cases were seen by him in consultation with the private practitioner concerned.

(ii) *Institutional Treatment.* During the year 1933, nineteen patients suffering from puerperal fever or puerperal pyrexia were admitted to Hospitals and Institutions at a cost of £331 16s. 6d., the amount recovered from patients being £90 13s. 9d.

(iii) *Puerperal Fever Units at Chelmsford Public Assistance Institution and Oldchurch Hospital, Romford.* The valuable work carried out by these two special units, which was mentioned in the report for 1931, has been continued and full advantage of the facilities has been taken by the Public Health Committee, as well as by certain autonomous child welfare authorities in the County. Details of the work carried out have been received and the following is a brief summary thereof :—

Institution.	No. of patients admitted.	Duration of Stay.					Discharged.	Died.
		0—7	8—14	15—21	22—28	Over 28 days.		
Chelmsford ..	26	1	10	4	4	7	23*	3
Romford ..	24	1	..	2	5	16	20	4

*One transferred to Oldehureh Hospital and one to Severalls Mental Hospital.

(iv) *Skilled Nursing.* The arrangements were continued with the Essex County Nursing Association for the provision of skilled nursing in the homes of patients when the circumstances render the removal of the patient to hospital difficult or impossible.

(v) *Bacteriological Examinations of (a) lochia, (b) blood.* Facilities for these examinations were available under the County Laboratory Scheme.

(11) PUBLIC HEALTH (OPHTHALMIA NEONATORUM) REGULATIONS, 1926. The arrangements made under these Regulations were fully set out in the Report for the year 1927.

During the year ended 31st December, 1933, copies of 76 notifications of Ophthalmia Neonatorum, made by medical practitioners to Medical Officers of Health in the Administrative County, were received.

Seventeen of the above notifications relate to patients living in the County Child Welfare Area and the following particulars of these patients have been obtained :—

Treated		Vision		Vision		Total		Deaths.
At Home.	In Hospital.	Unimpaired.		Impaired.		Blindness.		
		R.	L.	R.	L.	R.	L.	
13	.. 4	.. 16	.. 16	—	.. —	.. —	.. —	.. 1

No patients were admitted to Hospital during the year under the County Council's arrangement for the treatment of this disease.

(12) **HOSPITAL TREATMENT FOR MATERNITY PATIENTS.** The arrangements with certain hospitals for the admission of the following types of maternity patients were continued and extended to the Mothers' Hospital, Clapton, and the new Maternity Home established by the Colchester Corporation :—

- (a) Complicated or difficult cases of confinement where hospital treatment is essential.
- (b) Cases of confinement where, in the opinion of the Medical Attendant, the patient cannot with safety be confined in her own home.

During the year one hundred and thirty-three patients were admitted under the above schemes at a cost of £970 10s. 6d., the amount recovered from patients being £489 12s. 8d.

(13) **TREATMENT OF MINOR AILMENTS—CHILDREN UNDER SCHOOL AGE.** This scheme was continued and 15 children under school age received operative treatment during the year.

(14) **TREATMENT OF ORTHOPAEDIC PATIENTS.** Full details of the scheme for the treatment of orthopaedic patients adopted by the Public Health and Education Committees were given in the Annual Report for 1927.

As far as children of school age are concerned, these are dealt with in the School Medical Officer's Annual Report, so that the following information relates to children under school age in the County Council's Child Welfare Area :—

(a) *Number of Cases on Books.* At the end of 1933, there were approximately 253 Child Welfare patients requiring treatment, supervision or observation.

(b) *Ascertainment and Re-examination Clinics.* During 1933 Mr. Whitechurch Howell attended 64 clinic sessions for the County Council and carried out 240 examinations of County patients under school age.

(c) *Hospital Treatment.* The following figures show the position regarding institutional treatment on 1st January, 1933, as compared with that on 1st January, 1934 :—

	Child Welfare patients recommended and accepted by Committee for hospital treatment.		Being investigated.		No. in hospital under the County Scheme.
1st Jan., 1933	5	..	3	..	4
1st Jan., 1934	4	..	5	..	5

During the year 16 patients completed hospital treatment and 17 patients were admitted into hospital.

(d) *Orthopaedic After-Treatment Clinics.* The Orthopaedic After-Treatment Clinics were continued during the year and 613 attendances of children under school age were made. New After-Treatment Clinics were established at Chingford, Laindon and Hornchurch.

Owing to the resignation of Miss W. H. Tabor, Orthopaedic Masseuse, Miss M. E. Wells was appointed and commenced duty in October, 1933.

NURSING HOMES REGISTRATION ACT, 1927.

A detailed report was given in the 1928 Report of the provisions under the Act and the procedure adopted by the County Council. Regulations subsequently adopted have been referred to in previous reports.

The number of Registered Homes at the end of the year was as follows :—

(a) Maternity Homes only	..	..	..	24
(b) Maternity and Nursing Homes	..	..	..	16
(c) Nursing Homes (including Convalescent Homes)	..	..	..	5

The routine inspections of the Nursing Homes have been regularly carried out, and the standard of efficiency in the majority of the Homes during the year has been very satisfactory.

Where any cause for improvement or alteration in already existing conditions has been found necessary, the keeper of the Home has been informed, and in every instance a satisfactory co-operation has ensued.

In the Essex County Council Act, 1933, the following Section 184 is included :—

“(1) Section 4 of the Nursing Homes Registration Act, 1927 shall be ‘extended so as to enable the Council or as respects any District Council in the county to whom any powers and duties under that Act shall have been or shall be delegated that Council to make bye-laws for :—

‘(a) Regulating the admission into a nursing home of a person suffering from an infectious disease.

‘(b) The taking of precautions in case of any infectious disease ; and

‘(c) Requiring notice to be given to the County Medical Officer of Health (i) of infectious disease occurring in a nursing home for the time being registered by the Council and (ii) of a rise in the temperature of a maternity patient in a nursing home for the time being registered by the Council to 100.4 degrees Fahrenheit for twenty-four hours or its recurrence within that period.’

‘(2) For the purposes of this Section ‘infectious disease’ means any disease to which the Infectious Disease (Notification) Act, 1889 is for the time being applicable in any county district.”

The appropriate Committee of the County Council has under consideration draft bye-laws, upon which the observations of the Ministry of Health are being obtained.

CHILDREN AND YOUNG PERSONS ACTS, 1908-1932.

Infant Life Protection.

All the Health Visitors in the County Child Welfare Area are appointed Infant Life Protection Visitors and make visits of inspection at intervals of at least once a quarter to each foster-mother and child registered.

At the end of the year there were 721 registered foster-children in the care of 451 foster-mothers.

The effect of the Children and Young Persons Act, 1932, which came into operation on 1st January, 1933, was referred to in the previous year's report.

MIDWIVES ACTS, 1902-1926.

(a) PRACTISING MIDWIVES. During the year under review 334 midwives notified their intention to practise in the Administrative County, excluding the Colchester, Ilford, Leyton and Walthamstow Midwives. Of these, 296 were actually in practice at the end of the year 1933. These midwives are classified as follows :—

Total No. of Midwives in practice at end of year.	Trained.		L.O.S. Certificated.		Bona-fide.	
	Dep.	Indep.	Dep.	Indep.		
296 ..	169 ..	117 ..	2 ..	7 ..	1	

The total number of live births and still births which occurred during the year 1933 in the Administrative County, excluding Colchester, Ilford, Leyton and Walthamstow Boroughs, was 12,799, and of these, 5,791 (45.2 per cent.) were attended by midwives in the capacity of a midwife, and 2,755 (21.5 per cent.) as maternity nurses under the supervision of medical practitioners.

(b) HANDYWOMEN. During the year 1933 reports were received regarding two cases of confinement attended by two women who were not certified and who it was alleged had acted as midwives without being under the direction and personal supervision of a registered medical practitioner. A verbal caution was given in each case.

(c) NOTIFICATIONS. The following list shows the number of notifications received from certified midwives in accordance with the rules of the Central Midwives Board during the year as compared with the previous four years :—

	1929.	1930.	1931.	1932.	1933.
Records of Medical Aid ..	2085 ..	2285 ..	2006 ..	2036 ..	2025
Records of Still-births ..	109 ..	117 ..	103 ..	96 ..	101
Deaths of Mothers ..	6 ..	10 ..	4 ..	5 ..	2
Deaths of Infants ..	70 ..	73 ..	78 ..	66 ..	76
Artificial Feeding ..	74 ..	78 ..	54 ..	54 ..	61
Liability to be a source of Infection ..	*257 ..	*303 ..	*281 ..	*251 ..	*209
Laying-out for Burial ..	230 ..	235 ..	258 ..	261 ..	293
Ophthalmia Neonatorum or Dis-					
charging Eyes ..	250 ..	294 ..	237 ..	237 ..	†243

*This figure includes all cases of high temperature.

†Includes 30 cases notified as Ophthalmia Neonatorum.

Puerperal Fever, Puerperal Pyrexia and Ophthalmia Neonatorum.

Special investigations were made into all cases of high temperature of mother and discharging eyes of infant in a midwife's practice. The results of these investigations showed that during 1933, in four cases of high temperature and three of dis-

charging eyes, the rules of the Central Midwives Board were not properly carried out. Warning letters were sent or verbal cautions given to the midwives concerned.

The number of patients notified as suffering from Ophthalmia Neonatorum was 46, *i.e.*, 3.7 per one thousand live births.

Pemphigus Neonatorum.

All suspected cases of Pemphigus Neonatorum occurring in a midwife's practice are investigated with a view to seeing that every possible precaution is taken to prevent a spread of the disease.

Enquiries were made into 36 suspected cases occurring in Barking (1), Billericay R. (6), Braintree R. (1), Chelmsford R. (2), Dagenham U (14), Grays U (2), Maldon R. (1), Orsett R. (5), Rochford R. (1), Romford U. (1) and Tilbury U. (2).

It was necessary in one instance to interview a midwife regarding infringement of rules and she was cautioned by the Chairman of the Committee.

Inspection Visits.

Twelve hundred and eighty-seven routine visits were made to midwives during the year, and of these 61 were undertaken by Assistant County Medical Officers and 1,226 by the Chief Health Nurse and her Assistant, and the Relief Health Visitor.

Written cautions were sent to 11 midwives for minor infringements of the rules other than those referred to in the paragraphs relating to Puerperal Fever, Ophthalmia Neonatorum and Pemphigus Neonatorum above.

In no instance was it found necessary to report a midwife's conduct and mode of practice to the Committee or the Central Midwives Board except in the case referred to under the paragraph headed Pemphigus Neonatorum.

Doctors' Fees.

In accordance with Section 14 of the Midwives Act, 1918, during the year ended 31st December, 1933, the County Council paid the sum of £2,527 12s. 6d. as fees to medical practitioners and recovered from patients during the year the sum of £625 9s. 1d.

The following comparative table is of interest, shewing (a) the number of medical aid notices received from midwives during the past five years, and (b) the corresponding number of doctors' claims made against the County Council in respect of such notices. This table shows that the percentage of confinements in which medical aid was sought is still increasing :—

Year.	No. of Medical Aid Notices received from Midwives.	Percentage of Confinements attended by Midwives in which medical aid was sought.		No. of Medical Aid Notices for which Doctors' claims have been received.	Total amounts of claims.			Amounts re- covered from patients.		
					£	s.	d.	£	s.	d.
1929 ..	2085 ..	25.3	..	1352 ..	2,112	19	6 ..	852	2	2
1930 ..	2285 ..	31.9	..	1507 ..	2,225	19	6 ..	689	11	3
1931 ..	2006 ..	33.8	..	1495 ..	2,106	15	6 ..	644	3	3
1932 ..	2036 ..	34.0	..	1564 ..	2,285	11	9 ..	593	15	9
1933 ..	2025 ..	34.9	..	1575 ..	2,527	12	6 ..	625	9	1

Lectures.

The Essex Midwives Association arranged a special course of Lectures in Chelmsford, which was held in May and June, 1933. A. J. Wrigley, Esq., F.R.C.S., commenced the course with lectures on Infection, and subsequent lectures were given by A. A. Brews, Esq., F.R.C.S., on the Influence of the Endocrine Glands on Pregnancy and Labour, and by Miss Doubleday on the Premature Baby.

The lectures were greatly appreciated by the 60 midwives who attended the Course. The County Council assisted the Association by a grant towards the lecturers' fees, travelling expenses, &c.

Essex County Nursing Association.

(a) GENERAL. For the year 1933 the sum of £8,788 11s. 9d. was paid by the County Council to the County Nursing Association in accordance with the agreement.

(b) AGREEMENT. Full particulars were given in the Annual Report for 1932 of the revision in the Agreement between the Essex County Nursing Association and the County Council which came into operation on 1st April, 1933. This revision enabled the County Council to make grants in respect of capital and maintenance of motor cars for certain District Nursing Associations.

At the end of the year 1933, nineteen Associations were receiving motor car grants.

(c) DISTRICT NURSING ASSOCIATIONS. At the end of 1933 the number of District Nursing Associations in the Administrative County which were affiliated to the County Nursing Association and which employed 181 Nurses, was as follows :—

No. of affiliated D.N. Associations.	No. undertaking Midwifery and District Nursing.	No. performing Maternity and District Nursing duties only.
152	.. 144	.. 8 (3 of which undertake general nursing only).

District Nurses belonging to affiliated Associations during the year 1933 made the following visits :—Midwifery 31,641, Maternity 28,513, District General 198,293, District Tuberculosis 2,179, Health Visiting—Pre-natal 22,397, Post-natal 33,574, and Home Visits (School Children) 9,647.

Of the 152 affiliated Associations, 145 participate in the County Council's Combined Nursing Scheme.

(d) PARISHES SERVED—

Number in the County (excluding extra-Metropolitan area)	..	377
Number served by affiliated District Nursing Associations	..	326

This leaves 51 parishes not served by affiliated District Nursing Associations.

GENERAL.

(a) Maternal Mortality.

Details of the scheme given in last year's Report showed that an independent midwife practising in the County Child Welfare Area is allowed to claim compensation

at the rate of 10s. 6d. per patient if she refers a patient to an Ante-Natal Clinic or calls in a medical practitioner, and the patient is admitted to hospital as a result. Five claims were paid during the year 1933.

Early in 1933 attempts were made to establish a consultant service amongst medical practitioners for difficult and complicated cases of confinement and the Public Health Committee were prepared to recommend that medical practitioners called in as Consultants be paid a fee of £2 2s. per visit. Unfortunately the medical practitioners themselves have experienced difficulty in deciding who should be regarded as consultants, and up to the time of writing, no decision has been reached.

The County Council have agreed to pay an inclusive fee of £1 1s. where a medical practitioner who is engaged to attend a confinement has to call in the services of an anaesthetist.

The fee is only payable :—

- (i) In respect of patients residing in the area for which the County Council is the Child Welfare Authority.
- (ii) Where the doctor has actually been engaged for the confinement.
- (iii) In abnormal or difficult cases.
- (iv) Where the patient is unable herself to pay for the anaesthetist.

These arrangements are supplementary to those under the Midwives Act, 1918.

(b) Nutrition.

As indicated in the previous year's Report, Circular 1290, dated 27th October, 1932, issued by the Ministry of Health was considered and the replies received from the Child Welfare Medical Officers indicate that the position in Essex may be summarised as follows :—

- (1) That Nutritional Anæmia has only been found to exist among a few cases in a relatively small proportion of Child Welfare Centres.
- (2) All doubtful or suspicious cases were put on Hemolac or some special iron mixture such as Ferri et ammon cit with very good results.
- (3) The general indication from the replies suggests that Nutritional Anæmia is not very widespread or prevalent in Essex, and that the present methods of diagnosis and treatment at the Child Welfare Centres appear to be satisfactory.

(c) Post-Graduate Course—Independent Midwives.

No independent practising midwives participated in the scheme during the year.

(d) Report of First Assistant C.M.O. (Dr. J. L. Miller Wood).

ANTE-NATAL CLINICS. Attendances during the current year have been very satisfactory, and in several cases considerable increases occurred at those centres situated in the more populous areas. In such instances extra sessions were instituted in order to cope with the work.

The desirability for thorough post-natal examination is always stressed, and patients are encouraged to return to the Clinic after confinement for this purpose.

The younger women especially show great keenness and interest in their visits, and are fully alive to the benefits and importance of careful ante-natal and post-natal supervision.

CHILD WELFARE CENTRES. The work of the Centres continues to grow, and proves increasingly popular, especially with the younger generation of mothers who show an enthusiastic and intelligent interest in everything pertaining to an improvement in their children's health.

In many instances extra sessions have been found necessary at already existing centres in order to deal effectively with the increased number of attendances.

TODDLERS. Consideration was given to Ministry of Health Circular 1054, dated 5th December, 1929, in regard to the supervision of children under school age. It is estimated that 19000 children would be brought under supervision in the County Council's Child Welfare Area if this scheme is properly carried out. A large increase of medical and health visiting staff would be necessary to cope with the additional work. The whole matter received careful consideration by the Committee and it was finally decided to commence in a small way by :—

- (a) Establishing a number of clinics for Toddlers at or in conjunction with some of the larger Child Welfare Centres.
- (b) Obtaining the approval of the County Council to the appointment of four additional Health Visitors.
- (c) Referring to the Education Committee the question of the establishment of Nursery Schools.

In September, 1933, an experimental Toddlers' Clinic was established at Hornechurch Combined Treatment Centre. This has proved popular and an increasing number of children are being brought at regular intervals to the Centre.

WEIGHING CENTRES. Where the needs of a district have justified it, a Weighing Centre has been established. Such centres have frequently been the forerunner of a mature Child Welfare Centre.

MOTHERS' CLUBS. There are three such clubs at present in active operation in the County Council's administrative area. They are usually held in the evenings at a Child Welfare Centre, and have proved extremely useful as a means for disseminating health propaganda. Talks are frequently given on Health topics by the Health Visitor of the District, who is usually the Chief Organiser of the Club. From time to time talks are also given by the County Medical Staff.

BIRTH CONTROL. Enquiries for advice and information regarding contraceptive methods and appliances are becoming more and more frequent.

Two of the Women Medical Officers on the County Staff carry out this work. A large number of women have now been given such advice, and fitted with appliances where their needs have been considered to fulfil the requirements as recommended in the Ministry of Health Memorandum 153/M.C.W.

DIPHTHERIA IMMUNISATION. Consideration has been given to this matter from time to time, and in January, 1929, the County Education Committee decided that whilst the actual measures for preventing the spread of diphtheria were primarily for the local Sanitary Authorities, such Authorities could apply to the School Managers for the use of Schools out of school hours for the carrying out of Diphtheria Immunisation.

In March, 1932, the Public Health and Housing Committee reported to the County Council upon the Diphtheria Immunisation of children in County Council Sanatoria, and the Council resolved that in future when arranging for the admission of children to the County Sanatoria, the County Medical Officer of Health should endeavour to obtain the consent of the parents to the immunisation of the children should the necessity arise.

Since Diphtheria Immunisation has now become such a well recognised part of preventive medicine, the Committee in November, 1933, recommended that facilities be offered for Diphtheria Immunisation at certain centres in co-operation with local Sanitary Authorities, and provision has been made for this in the estimates for the financial year 1934-35.

No immunisation was carried out at the County Council's Child Welfare Centres in the year under review, but arrangements are proceeding in order to commence this work in the near future.

(e) Report of Chief Health Nurse.

The Chief Health Nurse (Miss D. M. Landon) has furnished the following report in connection with her duties during 1933 :—

(1) **HEALTH VISITING SERVICE.** The work of the Health Visitors continues to increase and the variety of duties they now have to undertake calls for considerable tact, energy and intelligence. Our Health Visitors make every effort to meet these additional responsibilities and deal with them efficiently.

The opportunity given to two Health Visitors annually to attend the Winter School for Health Visitors at Bedford College is much appreciated. This year several have attended an interesting course of evening lectures on Tuberculosis, at Victoria Park, entering for the examinations and gaining the Certificate. A good proportion have also given up their Saturday afternoons to attend the Midwives' lectures provided by the County Council in order that their knowledge of midwifery and the young child might be kept up-to-date.

The Essex County Council Travelling Exhibition continues to be of great value in teaching and stimulating interest in public health. Additions have been made to it and the Orthopædic Section arranged by Miss M. Scott, is now a particularly attractive feature.

(2) DISTRICT NURSING ASSOCIATIONS. The work of the County Nursing Association has developed, and new Associations have been formed at Hadleigh and Collier Row, Romford, whilst extra nurses have been engaged for Clacton and Chingford District Nursing Associations.

Additional parishes are being nursed, *i.e.*, St. Lawrence, by the Bradwell-on-Sea Nursing Association, and Rawreth by the Woodham Ferrers District Nursing Association. Both these districts have purchased cars for their nurses. Great and Little Waltham have amalgamated, a motor car having been purchased for the nurse.

The work has been carried on satisfactorily, and the Voluntary Committees are showing an increasing willingness to co-operate with the County Council and to conform to the rules of the County Nursing Association.

COMBINED MEDICAL SERVICE.

The Combined Medical Service Scheme, outlined in detail in previous reports, was continued during the year with the following alterations :—

(a) *Brightlingsea*. Owing to the resignation of Dr. E. Dickin as Medical Officer of Health, by arrangement with the County Council, Dr. J. Ramsbottom, Combined Medical Officer in the Tendring area, was also appointed Medical Officer of Health for the Brightlingsea Urban District as and from 1st April, 1933.

(b) *Grays, Purfleet, Tilbury and Orsett*. Upon the retirement of Dr. Maud Bennett as Assistant County Medical Officer in this area, it was decided by the Local Authorities and the County Council to make a joint appointment whereby a lady assistant Medical Officer of Health and Assistant County Medical Officer would undertake duty for the authorities concerned. Dr. A. R. Park took up this appointment in May, 1933.

(c) *Braintree and Dunmow United Districts*. Dr. J. Hatton was appointed Combined Medical Officer from 1st April, 1933, in place of Dr. J. S. Bradshaw, resigned.

(d) *Dagenham*. As and from 1st January, 1934, an arrangement was made with the Urban District Council whereby the services of their Medical Officer of Health, Dr. E. W. C. Thomas, are utilised by the County Council in co-ordinating the County Medical and Nursing Services in the district. The County Council agreed to pay £100 per annum for this service.

COMBINED TREATMENT CENTRES.

The following new Combined Treatment Centres were opened during the year under review :—

Centre.	Date.
Chingford (Marmion Avenue) ..	.. 6th May, 1933.
Hornchurch (Westland Avenue) ..	.. 31st May, 1933.
Waltham Abbey (The Cedars) ..	.. 12th September, 1933.

Other new Combined Treatment Centres are in course of preparation and will be referred to in future reports.

PART IV.

PUBLIC ASSISTANCE..

General.

From the standpoint of the Public Assistance Medical work the year 1933 was one of consolidation and improvement in many directions, as mentioned later in this section of the Report.

It will be observed that though none of the Institutions in the County have been appropriated in accordance with the Local Government Act, 1929, steps have been taken to classify the accommodation and to strengthen the clinical and nursing services wherever possible.

Further consideration was given to the Ministry of Health's Memorandum on the Survey of Medical Services in Essex carried out during 1931-32, particularly in regard to the urgent need for Hospital and Institutional accommodation in the southern and south western areas of the County. With the object of preparing a complete scheme for accommodation of the sick in the County of Essex, the County Council has recently approved of the establishment of a Special Committee of the Council (consisting of seven members each of the Public Health and Housing Committee and Public Assistance Committee) and this Special Committee will shortly commence its work.

In the meantime steps have been taken to classify the accommodation available for the sick in Essex Institutions as well as outside Institutions, who provide beds under agreement. Steps have also been taken to review the Nursing staff at each Institution and to prepare a Scheme for the recruitment and training of nurses and assistant nurses in the Essex Institutions.

Up-to-date information of the number of beds provided in Voluntary Hospitals has also been obtained and is summarised in Table XXIII on page 104a. The whole of this information will be helpful to the Special Committee mentioned above.

Friendly co-operation continues to be maintained with the Medical Officers of Public Assistance Institutions and the District Medical Officers throughout the County. It is gratifying to know that the new Card Index System of record keeping for District Medical Officers has proved generally successful, and minor difficulties which have arisen have been easily settled by personal interviews with the doctors concerned.

Institutional Accommodation for the Sick.

At the beginning of the present year a survey was carried out with the object of assessing the existing Institutional accommodation for the sick and the degree to which the Hospital needs of all parts of the County are met. The following brief information is given from this Survey which will be dealt with in more detail in the next Annual Report.

The Survey brought out the fact that Essex has no redundant Institutions and that full use is being made of the Institutions which have been provided in the County. There is a very definite lack of accommodation, particularly in the Romford and South Western Areas.

Below, in tabular form, is given a summary of the total accommodation available at the time of the Survey (March, 1934).

(a) INSTITUTIONS UNDER ESSEX PUBLIC ASSISTANCE COMMITTEE.

Total No. of beds available for sick patients in exist- ing County Public Assistance Institutions ..	1943	} In March, 1934.
Total No. of beds occupied by sick patients, ..	1941	

The 1941 patients include :—

Acute cases	659
Chronic	557
Infirm	725

Total No. of Mental Cases in Institution Wards ..	163	} included in above figures.
Total No. of Tuberculosis Cases in Institution Wards	114	

(b) BY AGREEMENT WITH OUTSIDE AUTHORITIES.

	Beds available by agreement.	Beds occupied by patients.	Beds occupied by able-bodied.
West Ham Institutions ..	1221	983	296
North Middlesex Hospital ..	33	24	—
Edmonton Institution ..	21	17	—
Bishops Stortford Institution ..	51	47	9
Rochford Hospital ..	128	88	1
Aldersbrook Children's Homes ..	131	—	135
	1585	1159	441

The 1159 patients include :—

Acute cases	370
Chronic	356
Infirm	433

Total No. of Mental Cases in Wards ..	251	} included in above figures.
Total No. of Tubercular Cases in Wards ..	30	

Table XXIV on page 104b, shows the beds provided and occupied for sick, maternity and mental cases by In-patients in Institutions under the control of the Essex Public Assistance Committee during the 12 months ended 31st December, 1933.

Further information, together with brief notes of any alterations or extensions with regard to each Institution is given below :—

COLCHESTER INSTITUTION.

Name of Medical Officer :	Address of Institution :
Dr. W. F. Payne.	14, Pope Lane, Colchester.
Name of Deputy Medical Officer :	Telephone No. : Colchester 3259.
Dr. R. D. Bradshaw.	

Nursing Staff Allowed.

Matron.
3 Sisters.
10 Assistant Nurses (Unqualified).
3 Junior Assistant Nurses (Unqualified).

Accommodation for Patients.

			No. of Wards.			No. of Beds.
Medical, Surgical, Chronic Sick and	}		11	.. Male		74
Mental .. ..				.. Female		75
Children .. ..	..	..	1	..		8
Maternity .. ..	..	..	1	..		3
T.B. .. ..	..	..	—	..		—
Isolation .. ..	..	..	—	..		—

Remarks, Services Provided and Improvements. The main portion of the building is old and generally unsatisfactory. The Infirmary deals with acute medical, chronic sick and mental cases, female T.B. Cases, Maternity and Sick Children. There is no provision in the Infirmary for dealing with Acute Surgical Cases. The Institution has been condemned and there is very limited room for extension.

The accommodation in the casual wards has been increased at a cost of £1,012.

STANWAY INSTITUTION.

Name of Medical Officer :	Address of Institution :
Dr. W. F. Payne.	Stanway, Colchester.
Deputy Medical Officer :	Telephone No. : Colchester 3303.
Dr. R. D. Bradshaw.	

Nursing Staff allowed.

1 Head Nurse.
1 Junior Nurse.
4 Assistant Nurses (Unqualified).

Accommodation for Patients.

			No. of Wards.		No. of Beds.
Medical, Surgical, Chronic Sick and	}		4	.. Male	32
Mental .. ..				.. Female	30
Children .. ..	..	—	..		—
Maternity .. ..	..	—	..		—
T.B. .. ..	..	2	..		4
Isolation .. ..	..	—	..		—

Remarks, Services Provided and Improvements. This Institution is almost entirely utilised for Chronic Infirm and Mental Cases. Maternity work is no longer carried out at this Institution, the cases are now being admitted into the Colechester Institution.

No improvements or extensions of importance were carried out during the year.

TENDRING INSTITUTION.

Name of Medical Officer :

Dr. F. Atthill.

Address of Institution :

Tendring, Clacton-on-Sea.

Name of Deputy Medical Officer :

Dr. J. Wright.

Telephone No. : Manningtree 46.

Nursing Staff Allowed.

Matron.

2 Ward Sisters.

1 Staff Nurse.

2 Junior Staff Nurses.

5 Assistant Nurses (Unqualified).

6 Junior Assistant Nurses (Unqualified).

1 Male Nurse.

Accommodation for Patients.

			No. of Wards.		No. of Beds.
Medical, Surgical, Chronic Sick and	}		13	.. Male	38
Mental .. ..				.. Female	55
Children .. ..	..	2	..		8
Maternity .. ..	..	1	..		2
T.B. .. ..	..	3	..		15
Isolation .. ..	..	—	..		—

Remarks, Services Provided and Improvements. This Institution is in a generally good condition and is well lighted and well ventilated. It provides adequate service for medical and maternity cases. There is excellent verandah accommodation for cases of Pulmonary and Surgical Tuberculosis.

No improvements or additions of any note were made during the year.

BRAINTREE INSTITUTION.

Name of Medical Officer :

Dr. T. W. Panter.

Address of Institution :

Rayne Road, Braintree.

Name of Deputy Medical Officer :

Dr. J. C. Edwards.

Telephone No. : Braintree 24.

Nursing Staff Allowed.

1 Superintendent Nurse.

3 Sisters.

5 Assistant Nurses (Unqualified).

4 Junior Assistant Nurses (Unqualified).

Accommodation for Patients.

	No. of Wards.		No. of Beds.	
Medical, Surgical, Chronic Sick and	6	..	Male	31
Mental .. ..		..	Female	54
Children	—	..		10
Maternity	1	..		2
Tuberculosis	—	..		—
Isolation	—	..		—

Remarks, Services Provided and Improvements. This is an old type of Institution and can only adequately provide facilities for treating chronic medical and mental cases.

Approval has been obtained for an additional floor, providing accommodation for 12 male patients at a cost of £1,240.

Extensions and improvements have also been carried out to the casual wards at a cost of £5,295.

SAFFRON WALDEN INSTITUTION.

Name of Medical Officer :

Dr. J. Bartlett.

Address of Institution :

Saffron Walden.

Name of Deputy Medical Officer :

Dr. M. Bartlett.

Telephone No. : Saffron Walden 32.

Nursing Staff Allowed.

Matron.

Head Nurse.

1 Junior Nurse.

5 Assistant Nurses (Unqualified).

Accommodation for Patients.

	No. of Wards.		No. of Beds.	
Medical, Surgical, Chronic Sick and	10	..	Male	28
Mental .. ..		..	Female	53
Children	—	..		1
Maternity	1	..		2
Tuberculosis	—	..		—
Isolation	—	..		—

Remarks, Services Provided and Improvements. This Institution is over 100 years old and in poor condition. It has been condemned and the expenditure of any large sums of money on improvements or extensions is not justified. Consequently only minor structural improvements and the installation of sectional heating apparatus at a cost of £549 were carried out during the year. No provision is made at this Institution for dealing with surgical cases, tuberculosis cases or cases needing isolation.

EPPING INSTITUTION.

Name of Medical Officer :
Dr. Roy Evans.

Address of Institution :
The Plain, Epping.

Name of Deputy Medical Officer : Telephone No. : Epping 30.
Dr. W. F. Erskine.

Nursing Staff Allowed.

Matron.
1 Superintendent Nurse.
4 Ward Sisters.
1 Staff Nurse.
2 Junior Nurses.
8 Assistant Nurses (Unqualified).
9 Junior Assistant Nurses (Unqualified).

Accommodation for Patients.

	No. of Wards.	No. of Beds.
Medical, Surgical, Chronic Sick and } 11 .. Male 66		
Mental } .. Female 99		
Children — .. 2 cots.		
Maternity 1 .. 3		
Tuberculosis 2 .. 6		
Isolation 2 .. 4		

Remarks, Services Provided and Improvements. This Institution is in good condition, and there is approximately 5 acres of land which could be used for any future extensions.

The Institution is capable of providing adequate service for all classes of cases with the exception of acute surgical cases.

A new modern Block for Tuberculosis patients, built in the cubicle style, at a total cost of £4,075 is now nearing completion. This will provide excellent accommodation for 20 male and 20 female patients. The new Nurses' Home is now completed and provides accommodation for 34. Alterations and the provision of a lift in the old Institution will make an extra 40 beds available. An entirely new block of buildings on vacant land is to provide accommodation for 86 casuals.

ORSETT INSTITUTION.

Name of Medical Officer :

Dr. F. A. M. Nelson.

Address of Institution :

Orsett, Grays.

Name of Deputy Medical Officer :

Dr. N. Macfarlane.

Telephone No. : Orsett 48.

Nursing Staff Allowed.

- 1 Superintendent Nurse.
- 4 Sisters.
- Staff Nurse.
- 2 Junior Nurses.
- 10 Assistant Nurses (Unqualified).
- 10 Junior Assistant Nurses (Unqualified).
- 3 Male Attendants.

Accommodation for Patients.

	No. of Wards.		No. of Beds.	
Medical, Surgical, Chronic Sick and	16	..	Male	69
Mental .. ..		..	Female	88
Children	—	..		20
Maternity	5	..		7
Tuberculosis	2	..		16
Isolation	—	..		—

Remarks, Services Provided and Improvements. Some of the older parts of the Institution are badly planned and poorly ventilated. The Medical and Maternity Wards in the newer part of the Infirmary are excellent. There is also excellent accommodation for Female Tuberculosis Cases. It is proposed to erect a detached building of light construction for Isolation purposes at an approximate cost of £576.

OLDCHURCH HOSPITAL, ROMFORD.

Name of Medical Superintendent :

Dr. W. S. O'Loughlin (Resident).

Address of Institution :

1, Oldehurch Road, Romford.

(There is also one Senior Resident

Telephone No. : 1900.

and 4 Assistant Medical Officers

and one Junior Medical Officer).

Nursing Staff (April, 1934).

- | | |
|---------------------------|-------------------------|
| 1 Matron. | 19 Ward Sisters. |
| 3 Assistant Matrons. | 14 Staff Nurses. |
| 1 Sister Tutor. | 1 Junior Nurse. |
| 1 Assistant Sister Tutor. | 1 Masseuse. |
| 2 Home Sisters. | 1 Masseur. |
| 3 Sisters. | 33 Assistant Nurses. |
| 4 Night Sisters. | 180 Probationer Nurses. |
| 2 Ambulance Nurses. | 16 Temporary Nurses. |

Accommodation Provided for Patients.

	No. of Wards.	No. of Beds.
Medical, Surgical, Chronic Sick and } 17 .. Male 211		
Mental } .. Female 279		
Children 3 .. 150		
Maternity 1 .. 30		
Tuberculosis 2 .. 98		
Isolation 1 .. 30		

Remarks, Services Provided and Improvements. A new block " D " is in course of erection and should be completed in September, 1934. This will provide 78 beds at a total cost of £8,570.

Approval has been given to the provision and equipment of an improved X-ray and Light Treatment Department at a cost of £7,500.

During the year a room was fitted out for use in carrying out minor pathological examinations and a trained Laboratory Assistant appointed.

In the Casual Wards two 20-bed and two 14-bed dormitories have been erected at a cost of £721 19s. 10d.

CHELMSFORD INSTITUTION.

Name of Medical Officer :

Dr. J. T. Whitley.

Name of Deputy Medical Officer :

Dr. S. G. Corner.

Address of Institution :

48, Wood Street, Chelmsford.

Telephone No. : Chelmsford 61.

Nursing Staff Allowed.

Matron.

1 Superintendent Nurse.

3 Sisters.

3 Staff Nurses.

1 Junior Nurse.

5 Assistant Nurses (Unqualified).

5 Junior Assistant Nurses (Unqualified).

Accommodation for Patients.

	No. of Wards.	No. of Beds.
Medical, Surgical, Chronic Sick and } 10 .. Male 52		
Mental } .. Female 60		
Children 1 .. 4		
Tuberculosis — .. —		
Maternity 4 .. 10		
Isolation — .. —		

Remarks, Services Provided and Improvements. This Institution provides an excellent specialised service for Maternity and Puerperal cases. 80 Maternity cases were admitted into this Institution in 1933 as compared with 68 cases in 1932. 26 cases of Puerperal Fever were treated as compared with 20 cases in the previous year. There is a shortage of beds for Maternity and Puerperal cases, but steps are to be taken in the near future to increase the female accommodation at this Institution.

The Casual Wards have been improved and extended at a cost of £2,150.

MALDON INSTITUTION.

Name of Medical Officer :

Dr. M. J. T. Wallis.

Address of Institution :

32a, Spital Road, Maldon.

Name of Deputy Medical Officer :

Dr. C. Simpson.

Telephone No. : Maldon 35.

Nursing Staff Allowed.

1 Head Nurse

1 Staff Nurse.

4 Assistant Nurses (Unqualified).

2 Junior Assistant Nurses (Unqualified).

1 Male Nurse.

Accommodation for Patients.

			No. of Wards.		No. of Beds.
Medical, Surgical, Chronic Sick and	}		4	.. Male	25
Mental .. ..				.. Female	26
Children .. ..		..	—	..	—
Maternity .. ..		..	1	..	1
Tuberculosis .. ..		..	2	..	4
Isolation .. ..		..	—	..	—

Remarks, Services Provided and Improvements. The buildings are in good condition and there is some unused accommodation in the "House" portion of the Institution. This accommodation can be utilised to relieve overcrowding in other Institutions. The Infirmary is capable of dealing with acute and chronic medical cases, maternity and tuberculosis cases.

Improved and added bathing facilities were provided during the year at cost of £291.

Steps are now being taken to convert the present old Isolation Block into Nurses' Home at a cost of £1,568.

Owing to improvements in the accommodation in the Chelmsford and Colchester Casual Wards and extensions at Braintree the Maldon Casual Wards have been closed.

BILLERICAY INSTITUTION.

Name of Medical Officer :

Dr. J. D. Wells.

Address of Institution :

The Retreat, Billericay.

Name of Deputy Medical Officer :

Dr. H. C. Gunter.

Telephone No. : Billericay 2.

Nursing Staff Allowed.

- 1 Superintendent Nurse.
- 3 Ward Sisters.
- 1 Junior Nurse.
- 6 Assistant Nurses (Unqualified).
- 2 Junior Assistant Nurses (Unqualified).
- 2 Male Attendants.

Accommodation for Patients.

				No. of Wards.	No. of Beds.	
Medical, Surgical, Chronic Sick and	}	12	.. Male		29	
Mental .. ..			.. Female		29	
Children .. ..	..	—	..		8	
Maternity .. ..	..	1	..		4	
Tuberculosis .. ..	..	—	..		—
Isolation .. ..	..	—	..		—

Remarks, Services Provided and Improvements. This is a good, fairly up-to-date Institution. The “new” Infirmary is an excellent building and more use could be made of it for acute Medical, acute Surgical and Maternity cases. The Institution has a fully equipped operating theatre and could be developed into an excellent surgical unit.

The present Receiving Ward Block is to be converted into living quarters for the Master and Matron. The present Master’s quarters can then be used as bedrooms for Nurses, thus leaving the present temporary accommodation available as excellent accommodation for cases needing isolation.

It is proposed to provide a padded room and an observation ward for male mental patients.

Children’s Homes.

Particulars of the Children’s Homes in the Administrative County are given below :—

Area.	Address of Home.	Beds available 31-12-33.		Beds occupied 31-12-33.	
		Boys.	Girls.	Boys.	Girls.
Colchester	.. Villa Road, Stanway	.. 28	22	.. 28	20
„	.. Tendring, Clacton	.. 26	24	.. 25	24
Braintree	.. Friars, Bradford Street, Bocking ..	.. 16	15	.. 15	11
Saffron Walden	.. New Street, Dunmow	.. 6	14	.. 6	10
Epping	.. Coopersale, Epping	.. 26	17	.. 26	15
South Eastern	.. 61, Whitehall Road, Little Thurrock ..	.. —	14	.. —	13
Southern	.. Scattered Homes, Romford	96	71	.. 86	60
Chelmsford	.. Greenbourne Lane, Writtle	32	—	.. 31	—
„	.. Beehive Lane, Chelmsford	—	24	.. —	23
„	.. High Street, Maldon	.. 26	—	.. 24	—
„	.. High Street, Billericay	.. —	25	.. —	23

It will be noted that the number of Children's Homes available remain the same as for last year. There were no Homes closed or new ones opened. No extensions or alterations of any note were carried out in the Homes during the year.

As in the previous year special Isolation blocks for cases of non-notifiable infectious disease occurring in the Children's Homes are available at three of the Public Assistance Institutions.

MILK SUPPLY. It has been resolved that in future all Children's Homes shall be supplied with pasteurised milk. Pasteurisation plants are to be purchased for use at Homes where it is found impossible to supply pasteurised milk direct.

DENTAL TREATMENT. An arrangement has been entered into with the Education Committee for their whole-time Dentists to undertake the periodical dental inspection and treatment of children in Children's Homes.

Boarded-out Children.

The total number of boarded-out children for whom the Public Assistance Committee were responsible at the end of 1933 were 137.

They are supervised by voluntary visitors and part-time salaried officials. The general supervision is carried out by the newly-appointed Lady Supervisor.

Any necessary medical attention for boarded-out children is for the time being provided by allowing the Foster-Parents to call in either their own medical practitioner or the District Medical Officer.

Medical Staff.

1. INSTITUTIONS.

Particulars of the Medical Officers and Deputies for the various Institutions are given on pages 92 to 98.

2. DISTRICT MEDICAL OFFICERS.

There are 116 District Medical Officers in the Administrative County. As changes are frequently taking place, the usual procedure is being followed of not giving a full list of names in this report. Consideration has been given during the year to the question of the "open choice" method of medical treatment of Poor Law patients, and it is probable that this method of treatment will be given a trial in the Clacton area for a period of twelve months.

Supervision. A much larger proportion of special visits were paid to District Medical Officers during the year by members of the Central Medical Staff. This enabled friendly co-operation to be maintained and the visits were chiefly in connection with terms of appointment, the working of the new Card Index method of keeping records, &c. The visits were found very helpful to both sides.

New System of Records. The new Card Index Register (similar to that used under the National Health Insurance Act) has now been in use for a trial period of nearly 12 months. The system has worked smoothly and satisfactorily, and there is almost

complete agreement that it is a great improvement on the old method of keeping bound registers and has resulted in a considerable saving in clerical work.

3. CONSULTANT SERVICES.

The following Consultants were re-appointed for a period of 12 months. They attend mainly at Oldchurch Hospital, Romford, although their services are available for other parts of the County :—

Consultant Surgeon	Hamilton Bailey, Esq., F.R.C.S.
Consultant Orthopædic Surgeon	B. Whitchurch Howell, Esq., F.R.C.S.
Consultants—Tuberculosis :	
Pulmonary Cases	Dr. Burton Wood.
Non-Pulmonary Cases	Sir Henry Gauvain.
Consultant Ophthalmologist	T. Collyer Summers, Esq., F.R.C.S.
Consultant Radiologist	Dr. Mather Gardiner.
Consultant—Ear, Nose and Throat	Hamblen Thomas, Esq., F.R.C.S.
,, —Skin and Radium Dept.	
(Oldchurch Hospital,	
Romford)	Dr. Arthur Burrows.
,, —Nervous Diseases	Dr. W. G. Masefield.
	Dr. R. C. Turnbull.

R. W. Reid, Esq., F.R.C.S., was appointed during the year as a Consultant Surgeon. His services are mainly available for the Northern part of the County.

Maternity.

There has been a slight decrease in the volume of Maternity work undertaken at the County Public Assistance Institutions as compared with the previous year :—

	1933.	1932.
Total No. of Beds available for Maternity Cases ..	64	70
,, Maternity Cases admitted	592	645
,, Maternal Deaths	16	19
,, Fœtal Deaths	27	47

It will be noted that there was a reduction in the number of maternity beds provided from 70 in 1932 to 64 in 1933. The Maternity Ward at Stanway Institution was closed and all the maternity cases now go to the Colchester Institution. The number of maternity beds at Maldon Institution was reduced from four to one bed since the Institution now only admits emergency cases. The number of maternity beds at the Billericay Institution was reduced from five to four beds.

The decrease in the number of maternity patients admitted as compared with the previous year is more than accounted for by the number admitted into Oldchurch Hospital, Romford, which was 350 as compared with 422 in 1932.

The number of maternity cases admitted have materially increased at the Chelmsford and Billericay Institutions.

Report on Special Items.

AMBULANCE FACILITIES.

During the year a complete survey was made of the Ambulance Services throughout the County and a comprehensive report on the existing services was presented to

the Special Ambulance Sub-Committee of the Public Assistance Committee and it was recommended—

That Regional Conferences be convened to discuss a suggested scheme for the reciprocal use of ambulances and that for this purpose the Administrative County be divided into five areas.

That consideration be given to the desirability of three new Ambulances being provided by the County Council, viz., one for the Colchester area, one at Orsett Institution and a further one at Oldchurch Hospital, Romford.

The Survey showed that there are 66 Ambulances in the County ; of these 22 are provided for infectious cases only, 37 for non-infectious and accidents, and 7 ambulances are used for all purposes.

The matter of Ambulances has not yet been fully dealt with and consequently a more detailed report is held over until next year.

REPRESENTATIVE CONSULTATIVE COMMITTEE, BRITISH MEDICAL ASSOCIATION.

During the latter part of the year a representative Consultative Committee of the British Medical Association for the County of Essex was formed. The Committee consists of six medical practitioners representing different parts of the County and this Committee is available for consultation with Local Authorities regarding the various Public Health, Public Assistance and other matters affecting the medical profession.

Meetings are held every few weeks and the County Medical Officer is consulted at each meeting concerning matters which have been under discussion ; for example : Open Choice Method for Medical Treatment of Poor Law Patients, Payment of Mileage Allowance to Medical Practitioners under the Midwives Acts, Appointment of Consultants, &c.

This Committee should serve a very useful purpose in clarifying the position regarding the various problems which arise in the Public Health and Public Assistance Medical Services.

ISOLATION ACCOMMODATION IN PUBLIC ASSISTANCE INSTITUTIONS.

At the time of writing the Public Assistance Committee have instructed the County Architect and the County Medical Officer to go into the isolation accommodation at the various Public Assistance Institutions, and as a result of their enquiries the County Architect has been instructed to get out plans for the provision of additional accommodation at various Institutions. Fuller details will be mentioned in the report for the year 1934.

LADY SUPERVISOR.

Mrs. Burden, the Lady Supervisor, found it necessary to resign owing to ill-health, and in March, 1934, Miss L. Snowden was appointed as her successor, the duties of the post being revised and summarised as follows :—

- (1) *Childrens' Homes.* To visit all the Children's Homes in the Administrative County as directed, and to submit reports thereon to the Public Assistance Officer, together with such information relating to the classification and placing of children in the most suitable Homes or Institutions.

To report to the County Medical Officer upon the health of the children, particularly upon any requiring medical treatment.

To attend all meetings of the Children's Homes Sub-Committee and be personally responsible for the supervision of the Homes to such Sub-Committee.

- (2) *Boarded-out Children.* To supervise generally the boarded-out children as directed, and report thereon to the County Public Assistance Officer.

To report to the County Medical Officer on any matter affecting the health of the children.

- (3) *Institutions—Women's Side.* To inspect all the Institutions as directed, and consult with the Matrons on their management. To advise as to articles purchased for Matron's Stores. To report to the County Public Assistance Officer as to the placing of cases in the different Institutions.

- (4) *Infirmaries.* To inspect all Infirmaries as directed. To consult with the Matron and Superintendent Nurse and advise them on the best management, particularly with regard to the Nursing Staff. To report through the County Medical Officer to the Institutions Committee.

- (5) *General.* To perform such other duties as may be required from time to time.

MEMORANDA TO MEDICAL OFFICERS OF PUBLIC ASSISTANCE INSTITUTIONS AND CHILDREN'S HOMES AND TO DISTRICT MEDICAL OFFICERS.

In June, 1933, the various circulars and Memoranda issued by the County Medical Officer since April, 1930, to Medical Officers of Public Assistance Institutions and Children's Homes were consolidated and formed into one Memorandum issued by the County Medical Officer for the guidance of the Medical Officers. Similarly in October, 1933, a consolidated Memorandum was issued to District Medical Officers.

DIETARIES.

Experimental dietaries were brought into operation in October, 1932, and after slight amendments the dietaries were found to be quite satisfactory, and have now been permanently adopted. The original difficulties with regard to cooking facilities and extra staff have been now overcome. The dietary too provided a greater variety of meals and has proved economical.

The dietaries in the Childrens' Homes are still receiving consideration and are being closely supervised.

EXAMINATION OF BACTERIOLOGICAL SPECIMENS.

These examinations were carried out by arrangement with Dr. J. F. Beale as in previous years. The total number of specimens examined was 1281 as compared with 890 in 1932. Full details of the work carried out in 1933 are set out on pages 19 to 21.

ADMISSION AND DISCHARGE REPORTS.

A system of admission and discharge reports, with medical notes for use in connection with hospital cases admitted to Public Assistance Institutions was adopted during the year.

NURSING STAFFS.

A revision of the numbers of the Nursing Staffs at the Institutions was carried out during the year, and as a result some alterations have taken place. The revised Nursing Staff is as given under the separate Institutions on page 92 to 99.

VOLUNTARY HOSPITALS.

It will be of interest to record particulars of the accommodation and work done in the Voluntary Hospitals serving the Administrative County. See Table XXIII on page 104a.

TABLE XXIV.

TABLE A SHOWING BEDS PROVIDED AND OCCUPIED FOR SICK, MATERNITY AND MENTAL CASES FOR THE 12 MONTHS ENDED
31ST DECEMBER, 1933, IN INSTITUTIONS BELONGING TO THE COUNTY COUNCIL.

104b

Institution.	No. of Beds available.			No. of Admissions.	No. of women confined.	Live-Births.	Still-Births.	Deaths among newly-born.	Deaths among Children under 1 year.	Maternal Deaths.	Total No. of Deaths.	No. of patients discharged.	No. of Beds occupied.			No. of operations under general anaesthetics.	No. of Abdominal Sections.
	Men.	Women.	Children (under 16).										Average.	Highest.	Lowest.		
Billericay	29	34	8	919	65	63	2	1	1	—	116	777	44	66	22	146	41
Braintree	31	56	10	171	2	2	—	—	—	—	64	106	91	97	84	—	—
Chelmsford	52	70	4	484	79	67	13	1	2	2	128	346	116	127	107	18	1
Colchester	74	78	8	318	11	10	1	—	—	—	118	200	112	136	89	5	2
Epping	71	107	2	388	9	9	—	2	4	—	107	260	133	142	123	1	1
Maldon	27	29	—	119	2	2	1	—	—	—	51	106	45	52	39	—	—
Orsett	76	104	20	833	38	38	—	1	3	—	190	597	168	195	142	—	—
Romford	256	360	182	6,256	350	342	8	16	42	5	846	5,339	752	842	704	2,007	810
Saffron Walden ..	28	55	—	127	2	2	—	—	—	—	31	94	55	65	46	4	—
Stanway	34	32	—	106	—	—	—	—	—	—	42	35	46	51	37	4	—
Tendring	43	67	8	263	11	9	2	—	—	—	69	195	100	111	91	1	—
Totals	721	992	242	9984	569	544	27	21	52	7	1762	8055	1662	1884	1484	2186	855



TABLE XXV.
BIRTHS, DEATHS, ANNUAL RATES, &c., 1933.

SANITARY DISTRICT	Area (Acres)	Popu- lation, Census, 1931	Registrar-General's figures.			DEATHS AT VARIOUS AGES. (Figures supplied by Medical Officers of Health.)										ANNUAL RATES PER 1,000 OF ESTIMATED POPULATION.									
			Live Births.	Still Births.	Deaths at all ages.	Deaths under 1 year.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 35.	35 and under 55.	55 and under 75.	75 and upwards.	Total Deaths.	Birth-rate.	Death-rate.	Zymotic Death- rate.	T.B. Death- rate.	Other Respiratory Rate.	Infant Mortality Rate per 1,000 Births.				
URBAN.																									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	
BARKING E.	3,809	51,270	68,840	1,204	45	524	67	66	13	12	17	33	25	43	52	71	92	100	524	56	7.6	0.3	0.6	1.0	56
BENFLEET	6,356	12,691	12,970	150	4	167	5	5	...	1	9	8	4	8	15	21	35	56	172	33	12.9	0.5	0.5	0.8	33
BRAINTREE	2,224	8,912	8,965	126	3	92	4	4	...	...	...	5	5	4	15	12	22	23	92	22	10.3	...	0.7	0.8	22
BRENTWOOD	460	7,268	7,302	76	5	65	3	3	...	...	...	3	4	1	11	5	18	20	65	39	8.9	...	0.5	0.8	39
BRIGHTLINGSEA	2,852	4,137	4,173	35	2	69	...	...	...	...	...	...	...	...	...	...	...	...	...	18	16.5	...	0.7	0.2	18
BUCKHURST HILL	874	5,488	4,178	54	1	58	1	1	2	1	1	3	3	1	6	11	8	21	58	17	15.4	...	0.5	1.4	17
BURNHAM-ON-CROUCH	4,547	3,416	3,382	58	2	52	1	...	...	Not available.	...	Not available.	...	...	...	...	...	...	...	29	...	...	0.9	0.9	29
CARVEY ISLAND	4,351	3,532	4,564	68	3	56	2	1	1	1	4	2	2	6	6	13	14	6	56	56	14.9	12.3	0.2	2.0	56
CHELMFORD E.	3,113	26,537	26,940	358	20	262	20	20	2	5	10	16	10	20	29	39	61	83	262	58	13.3	9.7	0.4	0.3	1.1
CHIGWELL	...	...	4,355	52	3	13	3	3	...	...	...	4	1	2	2	6	7	17	44	58	11.9	9.9	...	0.5	0.7
CHINGFORD	2,810	22,653	26,630	405	14	218	20	20	3	9	4	10	11	16	19	27	40	59	218	49	15.2	8.2	0.2	0.5	0.8
CLACTON	4,652	15,848	16,350	160	7	182	8	8	6	2	1	6	...	...	...	...	...	...	182	50	9.8	11.1	0.2	0.5	0.7
COLCHESTER E.	11,333	48,701	50,060	663	27	506	36	36	12	37	34	91	34	40	59	76	76	70	619	54	13.2	10.1	0.6	0.8	2.4
DAGENHAM	6,554	89,362	95,550	1,785	75	622	86	86	12	...	...	...	...	...	...	...	...	...	...	48	6.5	0.3	0.5	0.8	48
EPING	1,420	4,456	5,124	74	4	59	3	3	...	...	...	...	...	...	...	...	...	...	...	21	11.5	...	0.2	1.2	41
FRINTON	419	2,196	2,030	13	1	21	2	2	...	...	...	...	...	...	...	...	...	...	...	29	...	...	0.5	2.0	154
GRAYS	1,360	18,173	18,780	286	10	177	6	6	1	6	7	4	10	8	21	32	50	32	177	85	15.2	9.4	0.2	0.6	21
HALESTADP.	649	5,883	5,806	59	4	83	5	5	...	...	...	...	...	...	...	...	...	...	...	53	14.9	12.0	0.3	0.7	53
HARWICH E.	1,512	12,046	12,740	190	10	153	19	10	1	1	1	6	6	5	16	36	39	32	153	52	14.9	12.0	0.3	0.7	53
HORNCHURCH	6,783	28,417	38,656	714	24	305	37	37	2	8	7	22	26	21	25	46	53	70	307	45	15.2	9.4	0.2	0.4	0.8
ILFORD E.	8,493	131,661	141,800	11,822	59	1,214	83	83	11	14	27	34	76	87	116	220	262	289	1,214	51	14.9	12.0	0.3	0.7	53
LETON E.	2,504	128,313	125,709	1,499	48	1,468	76	76	13	32	48	156	40	48	414	342	376	468	1,468	28	13.1	8.6	0.1	0.5	45
LOUGHTON	3,962	7,390	6,069	72	...	50	2	2	...	...	...	...	...	...	...	...	...	...	...	31	11.9	11.7	0.2	0.6	1.4
MALDON E.	3,004	6,559	6,654	98	5	91	3	3	1	...	...	...	...	...	...	...	...	...	...	28	11.9	8.2	...	0.2	0.8
PURFLEET	8,900	8,511	8,807	160	2	88	8	8	1	3	3	8	6	9	13	12	24	88	18.2	31	14.7	13.7	0.3	0.7	31
RATLEIGH	5,644	6,256	6,827	92	5	67	1	1	...	...	...	...	...	...	...	...	...	...	...	50	18.2	10.0	...	1.0	1.4
ROMFORD	5,627	35,918	42,500	719	30	389	32	31	10	2	9	14	27	34	36	61	73	91	388	11	10.2	9.8	...	0.6	0.4
SAFFRON WALDEN E.	7,502	5,930	6,263	59	...	69	5	5	...	...	...	...	...	...	...	...	...	...	...	45	16.9	9.2	0.2	0.6	0.8
+SHOEBOURNNESS	1,031	6,720	5,304	94	2	53	3	...	...	Not available.	...	Not available.	...	...	...	...	...	...	...	29	9.4	11.0	...	...	1.0
TILBURY	1,859	16,825	16,690	341	17	159	21	21	3	7	11	8	8	16	16	18	31	20	159	37	11.9	8.2	...	0.2	0.8
WALTHAM HOLY CROSS	11,016	7,115	7,004	79	2	66	5	5	...	...	...	...	...	...	...	...	...	...	...	31	13.5	9.8	...	0.6	0.4
WALTHAMSTOW E.	4,342	132,972	135,600	1,070	65	1,337	89	89	17	16	28	61	157	61	9	8	15	18	66	33	10.2	9.4	0.1	0.4	1.3
WATTON-ON-THE-NAZE	1,951	3,071	2,946	35	...	45	1	1	...	...	...	...	...	...	...	...	...	...	...	29	13.1	10.0	...	...	1.0
WANTLEAD	1,679	19,183	19,710	177	2	226	12	13	...	...	...	...	...	...	...	...	...	...	...	68	11.9	15.3	...	...	1.4
WEST MERSEA	3,171	2,067	2,199	27	1	26	1	1	...	...	...	...	...	...	...	...	...	...	...	37	9.0	11.5	0.1	0.5	1.3
WYTHAM	3,712	4,367	5,137	65	2	47	2	2	1	...	...	...	...	...	...	...	...	...	...	31	12.3	11.3	...	0.4	0.4
WYVENHOE	1,562	2,193	2,241	27	2	23	2	...	...	...	...	...	...	...	...	...	...	...	...	74	12.7	9.1	...	0.6	0.8
WOODFORD	2,163	23,946	26,840	352	15	231	15	15	4	5	4	7	7	14	13	45	60	57	231	43	12.0	10.3	...	0.9	0.9
TOTAL	113,559	918,631	985,670	13,948	521	9,353	680	680	105	129	226	366	493	602	918	1,486	2,034	2,314	9,353	49	13.1	8.6	0.3	0.4	1.0
RURAL.																									
BELCHAMP.	26,501	3,982	3,937	45	1	57	2	2	...	...	...	...	...	...	...	...	...	...	...	49	14.1	9.5	0.2	0.6	1.0
BILLERICAY	49,393	39,700	44,070	625	26	488	32	...	...	...	...	...	...	...	...	...	...	...	...	49	14.2	11.1	0.1	0.6	1.0
+BRAINTREE	62,352	21,880	21,299	253	8	250	16	16	...	...	...	...	...	...	...	...	...	...	...	49	13.3	11.7	0.05	0.2	1.5
BUMSTEAD	11,873	2,306	2,321	26	2	26	1	1	...	...	...	...	...	...	...	...	...	...	...	38	11.2	11.2	...	0.4	0.9
CHELMFORD	83,045	28,646	20,180	309	14	368	17	17	3	6	5	10	9	14	39	54	83	129	369	43	13.7	12.6	0.2	0.4	1.2
DUNLOW	73,501	15,564	16,140	226	5	205	17	17	...	...	...	...	...	...	...	...	...	...	...	75	14.0	12.7	0.1	0.3	0.9
+EPING	39,457	17,163	17,010	235	8	187	16	16	2	1	2	5	7	8	22	30	40	59	192	68	13.8	11.0	0.06	0.2	1.1
HALESTADP.	38,715	9,843	9,636	120	6	132	5	3	...	...	...	...	...	...	...	...	...	...	...	42	12.4	13.7	0.1	0.4	1.8
LEXDEN AND WINSTREE	66,246	18,970	19,420	253	9	233	14	14	3	2	5	4	4	15	48	33	50	133	133	55	13.0	12.0	0.1	0.3	1.1
MALDON	81,961	16,366	16,580	213	12	214	5	5	1	3	4	4	6	9	17	31	57	74	211	23	12.9	12.9	0.06	0.4	0.5
ONGAR	47,236	11,523	12,170	185	12	135	14	14	1	...	...	...	...	...	...	...	...	...	...	76	15.2	11.1	0.3	0.2	1.3
ORSETT	29,158	20,525	22,450	349	7	290	14	14	3	...	...	...	...	...	...	...	...	...	...	40	15.5	8.9	0.1	0.5	0.9
ROCHFORD	38,465	17,035	17,276	315	8	292	12	12	4	5	3	6	9	19	11	23	56	48	199	41	15.6	11.7	0.2	0.5	1.6
ROCHFORD	16,377	15,357	17,610	255	9	157	11	...	...	...	...	...	...	...	...	...	...	...	...	42	15.0	8.9	0.1	0.9	0.6
SAFFRON WALDEN	59,776	4,091</																							

† These figures relate to 9 months ended 30th September, 1933, when district was merged into Chigwell Urban District. Estimated population adjusted accordingly.

‡ Urban District created 1st October, 1933.

* Less Chigwell Parish as from 1st October, 1933.

+ Shoeburyness transferred to Southend County Borough from 1st October, 1933. Estimated population adjusted accordingly.

++ Area extended by inclusion of part of Braintree Rural District from 1st October, 1933.

+++ reduced by " " Rural District into Witham as from 1st October, 1933.

\$ " " " Southend County Borough as from 1st October, 1933.

The figures in Cols. 9-20 are given by the District Medical Officers of Health, whereas the totals are supplied by the Registrar-General.



TABLE XXVI.
CAUSES OF DEATH—YEAR 1933.

(Figures supplied by the Registrar-General).

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SANITARY DISTRICT.	DISEASES.																																			TOTAL.	Special Causes (Included in Column 36).				Leprosy.
	Typhoid and Paratyphoid Fevers.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Encephalitis Lethargica.	Cerebro-Spinal Fever.	Abscesses of Respiratory System.	Other Tuberculous Diseases.	Syphilis.	General Paralysis of the Insane, Tabes Dorsalis.	Cancer Malignant Disease.	Diabetes.	Cerebral Hemorrhage, &c.	Heart Disease.	Aneurism.	Other Circulatory Diseases.	Bronchitis.	Pneumonia (all forms).	Other Respiratory Diseases.	Peptic Ulcer.	Diarrhea, &c. (under 2 years).	Appendicitis.	Cirrhosis of Liver.	Other Diseases of Liver, &c.	Other Digestive Diseases.	Acute and Chronic Nephritis.	Puerperal Sepsis.	Other Puerperal Causes.	Concealed Fertility, Premature Birth, Malformations, &c.	Senility.	Suicide.	Other Violence.	Other Defted Diseases.		Causes ill-defined or unknown.				
URBAN.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)					
BARKING B.	1	1	3	5	22	1	1	1	44	6	1	1	22	3	16	183	20	26	34	7	17	6	1	3	4	14	3	34	10	7	21	34	524	...	...	...	...	...
BENFLEET	6	1	1	...	22	3	20	36	1	9	4	6	1	1	1	1	1	1	4	4	4	6	3	9	12	...	...	...	...	...
BRAINTREK	6	2	...	...	22	3	...	14	...	3	3	3	1	1	...	1	...	1	1	1	1	1	4	6	3	21	34	...	...	...
BRENTWOOD	4	1	...	...	12	...	...	14	...	5	2	...	...	...	...	...	...	...	1	1	1	1	1	1	6	...	...	...	...
BRIGHTLINGSEA	3	3	1	...	14	3	19	18	...	9	3	3	1	...	2	...	...	...	3	3	1	1	1	5	1	6	...	...	...	
+BUCKHURST HILL	3	3	...	...	8	...	...	17	1	...	1	3	3	1	...	...	...	...	1	2	...	...	1	1	5	3	1	69	...	...	
BURNHAM-ON-CROUCH	3	3	1	...	7	...	...	11	...	2	2	7	...	...	1	1	1	1	1	1	1	1	1	5	6	...	...	...		
CANTLEY ISLAND	1	1	...	...	7	...	...	5	...	2	2	7	...	...	...	...	...	...	3	3	...	...	...	5	6	...	...	...		
CHELMSFORD B.	1	9	8	1	...	8	1	...	...	12	12	34	1	12	9	13	8	2	...	2	...	...	...	5	7	2	1	14	26	5	1	5	56	...	...	
+CHIGWELL	2	1	...	1	8	4	...	8	...	3	1	1	...	...	...	...	...	...	1	1	...	...	2	2	5	14	30	2	262	...	...
CRINGFORD	1	1	1	16	13	4	...	9	2	...	1	28	...	5	42	7	8	13	...	1	4	8	...	...	...	3	12	...	...	17	3	3	10	18	...	43	...	...
CLACTON	1	1	1	4	9	...	...	2	...	...	...	29	...	11	48	2	14	6	5	1	2	2	...	...	2	3	6	...	...	4	9	5	11	3	...	218	...	...
COLCHESTER B.	2	2	13	29	5	1	4	5	1	1	82	8	27	134	1	14	19	20	4	5	3	3	3	2	2	10	20	...	27	7	8	22	32	...	182	...	...
DAGENHAM	1	2	5	11	21	47	14	...	1	...	...	2	69	4	16	121	4	9	24	45	9	7	6	5	3	3	22	15	2	3	49	7	8	32	58	...	506	2	...
EFFING	4	1	...	...	1	...	...	...	7	4	4	19	...	1	3	2	1	...	...	...	...	...	3	3	...	...	1	5	...	2	...	622	...	...	
FRINTON	1	...	...	1	...	...	...	5	...	2	3	...	...	3	3	1	...	...	...	...	...	...	...	...	...	1	5	...	2	...	59	...	...	
GRAYS	1	1	6	1	...	...	11	3	...	1	30	3	11	26	...	7	9	9	...	...	...	...	...	...	...	...	...	...	2	2	1	...	1	21	...	...	
HALSTEAD	1	...	...	1	2	5	...	...	5	2	...	...	7	2	8	19	...	3	3	2	1	2	1	1	1	1	6	3	...	...	3	15	4	8	16	1	177	...	...
HARWICH B.	2	1	...	9	...	...	9	2	...	4	17	2	22	21	1	8	10	2	1	2	1	3	2	2	2	2	...	...	2	9	...	5	5	...	83	...	...
HORNSHIRE	2	1	...	15	1	1	17	3	1	2	43	4	16	68	3	6	15	16	...	2	1	3	1	2	4	8	...	...	5	8	1	3	13	1	153	...	...
LYFORD B.	1	1	...	1	6	45	1	1	78	10	5	...	162	22	60	300	2	41	37	74	15	11	4	10	5	7	34	22	5	3	57	29	16	43	100	...	305	...	...
LITTON B.	...	1	4	4	7	65	2	1	78	12	2	4	200	20	115	362	11	30	80	74	21	12	6	13	6	6	30	38	2	...	51	43	21	43	102	1	1468	...	...
+LOUGHTON	2	...	...	...	1	...	...	...	3	2	5	14	...	...	1	1	...	2	...	...	...	1	1	...	...	...	...	1	3	4	6	...	50	...	...
MALDON B.	1	...	...	...	3	5	1	...	9	1	...	...	14	...	9	31	...	4	1	...	...	...	1	...	...	...	4	1	1	1	2	...	3	2	7	...	91	...	...
PORTFLEET	6	...	1	...	5	13	...	...	14	2	4	5	13	...	3	1	11	...	...	...	...	...	3	1	...	...	6	4	2	3	4	...	88	...	...
RATLEIGH	3	4	1	...	13	4	...	1	13	4	18	...	3	...	2	1	...	...	...	...	...	...	3	1	...	...	1	...	4	6	...	67	...	...	
ROMFORD	1	3	3	8	25	2	...	46	6	...	...	18	97	4	12	10	21	4	6	1	5	...	...	...	1	13	9	2	3	19	42	7	13	37	2	389	...	...
SAFFRON WALDEN B.	5	...	...	...	11	...	...	...	5	14	...	5	3	3	...	...	...	...	...	...	...	4	...	1	1	...	4	1	1	10	...	69	...	...	
+SHOEBURYNESSE	1	4	...	9	1	...	...	5	10	1	1	5	3	...	...	1	...	...	...	...	...	1	...	...	...	3	2	...	1	5	...	53	...	...
TILBURY	1	...	2	11	1	3	...	11	1	1	1	17	1	9	18	...	3	4	14	2	2	1	1	...	2	6	11	1	1	12	7	...	9	7	...	159	...	...
WALTHAM HOLY CROSS	5	...	...	...	3	2	...	...	8	1	2	18	1	2	2	5	2	1	1	...	...	2	6	11	1	1	12	7	...	9	7	...	66	...	...
WALTHAMSTOW B.	3	...	...	...	17	1	9	18	...	3	4	14	2	2	1	1	...	2	6	11	1	1	12	7	...	9	7	...	159	...	...
WALTON-ON-THE-NAZE	4	7	7	50	1	4	...	89	11	2	4	187	10	75	264	3	56	62	114	12	19	15	7	2	6	33	33	7	2	48	51	21	40	111	5	1357	...	...
WANSTEAD	1	...	1	...	5	...	...	...	9	1	...	...	29	1	13	59	...	8	9	14	2	2	1	3	...	...	4	11	...	1	7	10	5	6	23	1	45	...	...
WEST MERSEA	1	...	...	...	3	...	1	8	...	2	1	...	...	...	...	1	3	...	...	1	...	...	7	10	...	...	...	226	...	...	
+WITHAM	5	...	...	...	3	...	...	...	6	...	4	10	...	1	3	1	...	...	...	1	1	...	...	1	2	...	2	...	1	1	2	1	26	...	...
WIVENHOF	2	...	...	...	1	...	2	5	...	1	...	...	...	...	...	...	...	...	1	2	...	2	...	2	2	2	1	47	...	...	
WOODFORD	1	2	...	3	11	1	...	...	12	2	...	...	35	1	16	39	1	12	12	12	4	...	2	2	...	4	5	10	1	1	9	5	1	10	17	...	231	...	...
	5	4	23	30	49	360	16	17	555	91	14	24	1289	114	514	2066	38	319	383	545	100	88	72	88	23	47	223	255	28	21	421	311	127	339	738	16	9383	3	1	...	1
RURAL.	1	1	11	...	4	13	...	4	3	1	4	1	2	2	...	3	5	1	57	
BELCHAMP...	1	27	10	1	4	75	8	24	78	...	28	24	18	4	4	11	13	15	33	4	27	34	2	488	...	1
BILLERICAY	1	3	24	1	2	...	4	3	26	3	16	58	...	25	15	13	3	12	11	11	17	6	3	15	1	250	
+BRAINTREE	1	...	...	...	6	...	...	5	...	1	1	1	...	...	...	...	...	...	1	1	...	...	1	...	...	...	...	26	...	...	...
BUMPSTEAD	1	6	49	2	16	18	14	2	6	2	1	1	9	41	3	15	25	4	368	
CHELMSFORD	1	1	1	16	12	6	1	2	...	39	5	10	45	...	16	7	6	2	1	1	2	2	2	4	2	8	12	2	2	16	1	205	
DUNMOW	1	...	3	5	1	...	3	3	1	...	25	4	12	43	1	5	6	7	5	3	4	4	1	12	6	1	10	24	...	187	
+EPPING	1	5	1	5	17	2	9	25	...	5	9	6	2	2	4	4	4	15	2	4	10	3	132	
HALSTED	1	...	...	...	4	...	...	...	6	2	...	...	35	...	19	73	2	14	4	11	2	2	...	...	...	1	1	...	...	1	11	3	1	10	14	...	233	...	...
LEXDEN & WINSTREE	2	...	10	2	5	3	...	1	31	1	5	80	...	15	8	11	2	2	1	2	4	15									

NOTIFICATIONS OF INFECTIOUS DISEASE AND ATTACK RATES, 1933.

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(Figures obtained from the Weekly Notification Returns.)

SANITARY DISTRICTS.	Estimated Population 1933.	SCARLET FEVER.		DIPHTHERIA.		ENTERIC FEVER.		PUERPERAL FEVER.	PUERPERAL PYREXIA.	ERYSIPELAS.		OPHTHALMIA NEONATORUM.	PNEUMONIA.		ENCEPHA- LITIS LE- THARGICA.	ACUTE POLIO- MYELITIS.	SMALL- POX.	VARI- OUS.	TOTAL.
		No.	Per 1,000.	No.	Per 1,000.	No.	Per 1,000.	No.	No.	No.	Per 1,000.	No.	No.	No.	No.	No.	No.	No.	
URBAN.																			
BARKING B.	68840	296	4.3	132	1.9	3	0.04	2	18	36	0.5	14	92	1.3	1	3	2	525	1125
BENFLEET	12960	20	1.5	71	5.5	...	...	...	1	5	0.4	...	7	0.5	...	...	...	2	106
BRAINTREE	8965	2	0.2	3	0.3	...	...	...	...	1	0.1	...	12	1.3	...	...	3	7	28
BRENTWOOD	7302	42	5.8	10	1.4	...	...	...	1	1	0.1	...	10	1.4	...	...	...	...	64
BRIGHTLINGSEA	4173	4	1.0	1	0.2	...	...	...	...	2	0.5	...	5	1.2	...	...	...	...	12
BUCKHURST HILL	4178	1	0.2	...	...	...	...	...	...	3	0.7	...	5	1.2	...	...	...	...	9
BURNHAM-ON-CROUCH	3382	3	0.9	...	...	2	0.6	...	...	...	...	...	...	...	...	...	...	...	5
CANVEY ISLAND	4564	22	4.8	1	0.2	...	...	...	...	3	0.7	...	22	4.8	...	...	...	...	48
CHELMSFORD B.	26940	72	2.7	5	0.2	...	...	1	11	3	0.1	1	15	0.6	...	...	...	...	108
CHIGWELL	4355	11	2.5	3	0.7	...	...	...	...	2	0.5	...	1	0.2	...	...	...	...	17
CHINGFORD	26630	106	4.0	14	0.5	...	...	2	8	7	0.3	...	6	0.2	1	...	...	1	145
CLACTON-ON-SEA	16350	47	2.9	4	0.2	...	...	...	...	4	0.2	...	8	0.5	...	...	...	6	69
COLCHESTER B.	50060	123	2.5	11	0.2	7	0.1	...	2	14	0.3	2	122	2.4	...	2	...	105	388
DAGENHAM	95550	574	6.0	107	1.1	2	0.02	2	10	36	0.4	11	139	1.5	...	1	6	8	896
EPPING	5124	31	6.0	1	0.2	19	3.7	...	1	4	0.8	...	13	2.5	...	...	...	16	85
FRINTON-ON-SEA	2030	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4
GRAVESEND	18780	68	3.6	17	0.9	...	...	...	5	4	0.2	...	13	0.7	...	1	...	3	111
HALSTEAD	5856	47	8.1	1	0.2	12	2.1	...	3	2	0.3	...	2	0.5	...	...	...	...	67
HARWICH B.	12740	72	5.7	9	0.7	1	0.1	...	1	2	0.2	...	11	0.9	...	...	...	...	96
HORNCHURCH	38650	209	5.4	35	0.9	2	0.05	5	2	7	0.2	...	17	0.4	...	...	...	1	278
ILFORD B.	141800	405	2.9	156	1.1	19	0.1	6	10	57	0.4	14	151	1.1	3	4	...	3	828
LEYTON B.	125700	744	5.9	96	0.8	4	0.03	3	8	66	0.5	7	106	0.8	1	2	2	623	1662
LOUGHTON	6059	1	0.2	1	0.2	...	...	...	...	...	...	...	1	0.2	...	...	...	...	3
MALDON B.	6654	23	3.5	2	0.3	...	...	1	...	5	0.7	...	3	0.4	...	1	...	5	40
PURFLEET	8807	32	3.6	4	0.5	1	0.1	...	2	1	0.1	1	8	0.9	...	...	...	...	49
RAYLEIGH	6827	12	1.8	3	0.4	...	...	...	...	1	0.1	...	...	...	...	...	...	1	17
ROMFORD	42500	164	3.9	34	0.8	1	0.02	2	2	13	0.3	1	19	0.4	1	...	...	1	238
SAFFRON WALDEN B.	6263	9	1.4	...	...	...	...	...	1	3	0.5	...	...	...	...	...	...	...	13
SHOEBURYNESSE	5304	29	5.5	4	0.7	...	...	...	...	...	...	3	1	0.2	...	...	...	1	38
TILBURY	16690	81	4.9	40	2.4	2	0.1	1	1	1	0.05	1	52	3.1	1	...	...	118	298
WALTHAM HOLY CROSS	7004	21	3.0	...	...	...	...	...	2	9	1.3	...	29	4.1	...	...	...	...	61
WALTHAMSTOW B.	135600	681	5.0	333	2.5	7	0.05	8	22	73	0.5	7	172	1.3	...	3	...	477	1783
WALTON-ON-THE-NEZE	2946	4	1.4	...	...	...	...	...	...	1	0.3	...	1	0.3	...	...	...	7	13
WANSTEAD	19710	45	2.3	16	0.8	2	0.1	...	1	7	0.3	1	18	0.9	...	...	...	39	129
WEST MERSEA	2199	5	2.3	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	6
WITHAM	5137	8	1.6	...	...	...	...	...	...	3	0.6	...	11	2.1	...	...	...	...	22
WIVENHOE	2241	...	...	...	...	...	...	...	1	1	0.4	...	...	...	...	...	...	...	2
WOODFORD	26540	67	2.5	43	1.6	2	0.07	...	2	6	0.2	...	22	0.8	...	...	...	...	142
	985670	4081	4.1	1157	1.2	86	0.09	34	116	383	0.4	63	1094	1.1	8	17	13	1953	9005
RURAL.																			
BELCHAMP	3937	1	0.2	1	0.2	1	0.2	...	...	1	0.2	...	...	...	...	...	...	...	4
BILLERICAY	44070	149	3.4	78	1.8	2	0.05	3	6	7	0.2	2	38	0.9	1	1	...	106	393
BRAINTREE	12290	34	1.6	2	0.1	3	0.1	1	1	4	0.2	...	21	1.0	1	2	...	...	69
BUMPSTEAD	2321	...	...	...	...	...	...	...	...	1	0.4	...	...	...	...	...	...	...	1
CHELMSFORD	29180	54	1.8	11	0.4	...	...	3	4	3	0.1	1	15	0.5	...	...	...	...	91
DUNMOW	16140	45	2.8	1	0.06	...	...	...	3	5	0.3	2	13	0.8	...	1	...	...	70
EPPING	17010	29	1.7	1	0.06	4	0.2	...	...	3	0.2	2	6	0.3	...	...	...	27	72
HALSTEAD	9556	24	2.5	...	...	7	0.7	...	2	1	0.1	...	3	0.3	...	...	...	...	37
LEXDEN AND WINSTREE	19420	31	1.6	2	0.1	...	...	1	3	3	0.1	...	10	0.5	1	1	...	...	49
MALDON	16580	26	1.6	6	0.4	2	0.1	...	3	10	0.6	1	18	1.1	...	...	...	1	67
ONGAR	12170	22	1.8	4	0.3	...	...	...	1	1	0.08	...	9	0.7	...	...	...	...	37
ORSETT	22450	68	3.0	27	1.2	...	...	1	7	6	0.3	...	30	1.3	...	1	...	1	141
ROCHFORD	17230	106	6.2	30	1.7	...	...	3	2	6	0.3	3	29	1.7	...	2	...	...	181
ROMFORD	17610	93	5.3	10	0.6	...	...	1	1	3	0.2	2	1	0.06	...	...	...	1	112
SAFFRON WALDEN	9585	3	0.3	2	0.2	...	...	1	1	...	...	...	2	0.2	...	...	...	...	9
STANSTED	7121	9	1.3	3	0.4	...	...	...	1	1	0.1	...	3	0.4	...	...	...	...	16
TENDRING	25640	52	2.0	8	0.3	...	...	2	3	1	0.2	...	20	0.8	...	1	...	2	92
	291410	746	2.6	186	0.6	19	0.06	16	34	59	0.2	13	218	0.7	3	9	...	138	1441
TOT. BORO'S & URBAN DISTRICTS	985670	4081	4.1	1157	1.2	86	0.09	34	116	383	0.4	63	1094	1.1	8	17	13	1953	9005
TOTAL RURAL DISTRICTS	291410	746	2.6	186	0.6	19	0.06	16	34	59	0.2	13	218	0.7	3	9	...	138	1441
TOTAL FOR ADMIN. COUNTY	1277080	4827	3.8	1343	1.1	105	0.08	50	150	442	0.3	76	1312	1.0	11	26	13	2091	10446

† NOTE—See Table XXV as to adjustment of figures for these areas.



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